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RUDIMENTARY

ARCHITECTURE:

FOR

THE USE OF BEGINNERS,

AND STUDENTS.

THE ORDERS,

AND THEIR ÆSTHETIC PRINCIPLES.

BY

W. H. LEEDS, ESQ.

THIRD EDITION, WITH CONSIDERABLE ADDITIONS.

London:

JOHN WEALE,

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PREFACE TO FIRST EDITION.

It is important that an elementary treatise,—more particularly if it profess to be a popular one, intended for the use of beginners as well as for professional students,—should not only give rules, but explain principles also; and unless the latter be clearly defined, the memory alone is exercised, perhaps fatigued, owing to the former being unsupported by adequate reasoning. To confine instruction to bare matter-of-fact is not to simplify, much less to popularize it; since such mode entirely withholds all that explanation which is so necessary for a beginner, who will therefore probably feel more disheartened than interested. Any study which is presented in its very driest form by being divested of all that imparts interest to the subject, will appear dry and uninteresting in itself, and prejudice may thus be excited against it at the very outset.

Those who pursue the profession of Architecture must of course apply themselves to the study of it technically, and acquire their knowledge of it, both theoretical and practical, by methods which partake more or less of routine instruction. Others neither will nor even can do so. If the public are ever to become acquainted with Architecture,—not, indeed, with its scientific and mechanical processes of construction, but in its character of Fine Art and Design,—other methods of study than those hitherto provided must be furnished, as it appears to have been assumed that those alone who have been educated to it professionally can properly understand any thing of even the *Art* of Architecture,—a fatal mistake, which,

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had it clearly perceived its own interest, the Profession itself would long since have attempted to remove; it being clearly to the interest of Architects that the public should acquire a taste for Architecture, and some insight into it.

The study of Architecture, it may be said, has of late years acquired an increased share of public attention; but it has been too exclusively confined to the Mediæval and Ecclesiastical styles, which have consequently been brought into repute and general favour,—a result which strongly confirms what has just been recommended, namely, the policy of diffusing architectural taste as widely as possible. As yet, the taste for Architecture and the study of it, so promoted, has not been duly extended; for next to that of being acquainted with the Mediæval, the greatest merit, it would seem, is that of being ignorant of Classical Architecture and its Orders; which last, however ill they may have been understood, however greatly corrupted and perverted, influence and pervade, in some degree, the Modern Architecture of all Europe, and of all those countries also to which European civilization has extended. Nevertheless, no popular Manual on the subject of the Orders has yet been provided,—a desideratum which it is the object of the following pages to supply.

W. H. Leeds.

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PREFACE TO SECOND EDITION.

With the reception given to this Treatise on its first appearance its Author has every reason to be satisfied; but however useful it may have been found in explaining the *rationale* of the Orders and the general system of Classical Architecture, he cannot possibly flatter himself that it has in any degree contributed to the promoting a taste for that style, or the modern one founded upon it. After being for a length of time inordinately extolled, with far more of conventional cant, it may be suspected, than any real critical or æsthetic appreciation of it, that style has fallen into discredit, at least with the majority of writers, who loudly insist upon our henceforth abandoning it.

Among the objections started against it, much stress is laid upon that derived from its Paganism. Even *Renaissance* has been reviled by one most moral, virtuous, and immaculate critic, as being at the best quite semi-pagan in spirit, and moreover nothing less than 'LASCIVIOUS'!—a style, consequently, that ought to be put down by "The Society for the Suppression of Vice." Well! let us hope that that exceedingly squeamish and superlatively strait-laced gentleman will not get the nickname of 'Lascivious Ruskin.'—But enough here, although in itself it is very little, as regards the lack-a-daisical objections of Tartuffes and ultra-Puritans.

At present there is a sort of anarchy in Architectural doctrine and taste. While some are for confining us to Mediævalism or rather Pseudo-Mediævalism, others call upon us to renounce both the Pseudo-Mediæval and the Pseudo-Classical, and to get up an entirely new style founded upon the employment of newly-introduced materials, and consequent new modes of construction and design; notwithstanding that any further advance, or attempt at advance, in any of the styles

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now actually practised, is virtually prohibited by being scouted and sneered at.

As far as Taste is concerned, whether in regard to Architecture itself, or to Furniture and Decorative Art generally, actual prospects are anything but cheering; for what with Utilitarianism, Antiquarianism, and Materialism—all pulling, too, different ways,—little account is taken of positive æsthetic value. Far more importance is attached to mere elaboration, or to mere material, than to artistic design, or artistic effect. The general rage for cheap showiness on the one hand, and the rage for no less vulgar than extravagant purse-proud ostentation on the other, are symptoms among us of evil augury. In imperial and insanely luxurious Rome, the brains of a hundred peacocks were sometimes served up at a banquet as a single dish: with less taste for brains, and, perhaps, with very few of our own, we are satisfied with expending our admiration upon such extravagant and morbid fancies as rigmarole Austrian Beds and Malachite Doors.

As prefaces are very seldom read, the above escapade will probably escape all but those who will be far too discreet to take any notice of it. And as prefaces are usually ignored, it is chiefly for form sake here stated, that excepting the additional chapters on Supercolumniation, and Anthropomorphic Pillars, this edition is nearly a reprint of the first one. It is indeed further augmented by an Appendix containing two or three detached articles, which, if not exactly in keeping with the character of an 'Elementary' Treatise—as it must be confessed, is the case, they being in themselves more or less polemical, disquisitorial, and critical—do not at all interfere with the Treatise itself. Besides which it is to be hoped that those who shall not merely have perused, but carefully studied what is said of the 'Orders,' will be prepared for comprehending and taking an interest in the more discursive criticism which has been here thrown into the shape of an Appendix.

W. H. LEEDS.

Charlotte Street, Portland Place,
December, 1851.

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RUDIMENTARY ARCHITECTURE.

THE ORDERS.

ALTHOUGH this little treatise is limited to the consideration of Ancient and Classic Architecture, we may be allowed to explain briefly what is to be understood by Architecture in its quality of one of the so-called Fine Arts, if only to guard against confused and erroneous notions and misconceptions. It will therefore not be deemed superfluous to state that there is a wide difference between Building and Architecture,—one which is apparently so very obvious that it is difficult to conceive how it can have been overlooked, as it generally has been, by those who have written upon the subject. Without building we cannot have architecture, any more than without language we can have literature; but building and language are only the *matériel*,—neither of them is the art which works upon that *matériel*, nor the productions which it forms out of it. Building is *not* a fine art, any more than mere speaking or writing is eloquence or poetry.* Many have defined architecture to be the art of building according to rule; just as well might they define eloquence to be the art of speaking according to grammar, or poetry the art of composing according to prosody. Infinitely more correct and rational would it

* It has lately been suggested that the adoption of the term *Tecture* for mere Building and Construction, and that of *Kalotecture* (or beautiful tecture) for Architecture, would at once remove a great deal of the misconception now prevalent, and would clearly define the distinction to be observed between the two. So, no doubt, it would; therefore, although it is vain to think of bringing those new terms into popular use, they may be usefully applied in didactic writings, or wherever it is necessary to define and keep in view the difference between Building and Architecture.

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be to say that architecture is building greatly refined upon,—elevated to the rank of art by being treated *æsthetically*, that is to say, artistically. In short, architecture is building with something more than a view to mere utility and convenience; it is building in such a manner as to delight the eye by beauty of forms, to captivate the imagination, and to satisfy that faculty of the mind which we denominate taste. Further than this we shall not prosecute our remarks on the nature of architecture, but come at once to that species of it which is characterized by the Orders.

In its architectural meaning, the term ORDER refers to the system of columniation practised by the Greeks and Romans, and is employed to denote the columns and entablature together; in other words, both the upright supporting pillars and the horizontal beams and roof, or *trabeation*, supported by them. These two divisions, combined, constitute an Order; and so far all Orders are alike, and might accordingly be reduced to a single one, although, for greater convenience, they are divided into *three* leading classes or families, distinguished as Doric, Ionic, and Corinthian.* It was formerly the fashion to speak of the FIVE ORDERS, and also to treat of them as if each Order were reduced to a positive standard, admitting of very little deviation, instead of in reality including in itself many subordinate varieties, which, however they may differ from each other, are all formed according to one common type, and are thereby plainly distinguished from either of the two other Orders. The vulgar Five Orders' doctrine is, it is to be hoped, now altogether exploded; for if the so-called Tuscan, which is only a ruder and bastard sort of Doric, and of which no accredited ancient examples remain, is to be received as a distinct Order, a similar distinction ought to be established between the original Ancient or

* Mr. Ruskin does, indeed, by the mere *fiat* of his pen reduce the Orders to only two, for he expunges Ionic from the number as unworthy of the name of one! concerning which notable freak of that eminent doctrinaire more will be said in the Appendix.

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Grecian and the derivative Roman and Italian Doric, which differ from the other quite as much, if not more so, than the Tuscan does from either. Even the Grecian Doric itself exhibits many decided varieties, which, though all partaking of one and the same style, might just as well be made to constitute so many Doric Orders. The Pæstum-Doric, for instance, is altogether dissimilar from the Athenian or that of the Parthenon. Again, if the Composite is to be received as a distinct Order from the Corinthian, merely on account of its capital being of a mixed character, partaking of the Ionic, inasmuch as it has volutes, and of the Corinthian in its foliage, the Corinthian itself may with equal propriety be subdivided into as many distinct Orders as there are distinct varieties; and the more so, as some of the latter vary from each other very considerably in many other respects than as regards their capitals. Except that the same general name is applied to them, there is very little in common between such an example of the Corinthian or foliage-capital class as that of the monument of Lysicrates, and that of the Temple at Tivoli, or between either of them and those of the Temple of Jupiter Stator and the Pantheon, not to mention a great many others. Instances of the so-called Composite are, moreover, so exceedingly few, as not even to warrant our calling it the *Roman Order*, as if it had been in general use among the Romans in every period of their architecture. With far greater propriety might the Corinthian itself, or what we now so designate, be termed the Roman Order, being not only the one chiefly used by that people, but also the one which they fairly appropriated to themselves, by entering into the spirit of it, and treating it with freedom and artistic feeling. In fact, we are indebted far more to Roman than to Grecian examples for our knowledge of the Corinthian; and it is upon the former that the moderns have modelled their ideal of that Order.

What has been said with regard to striking diversity in the several examples of the Corinthian, holds equally good as to those of the Ionic Order, in which we have to distinguish not

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only between Roman and Grecian Ionic, but further, between Hellenic and Asiatic Ionic. Nor is that all: there is a palpable difference between those examples whose capitals have a *necking* to them, and those which have none,—a difference quite as great, if not greater, than that which is recognized as sufficient to establish for the Composite the title of a distinct Order from the Corinthian; inasmuch as the necking greatly enlarges the proportion of the whole capital, and gives increased importance to it. The Ionic capital further admits of a species of variation which cannot possibly take place in those of either of the other two Orders: it may have either *two faces* and two baluster *sides*, or four equal and similar sides,—the volutes being, in the latter case, turned diagonally, the mode chiefly practised by the Romans; but by the Greeks, and that not always, only in the capitals at the ends of a portico, by placing the diagonal volute at the angle only, so as to obtain two outer faces for the capital, one in front, the other on the 'return' or flank of the portico.

It is therefore unnecessary to say, that to divide the Orders into *Five*, as has been done by all modern writers, until of late years, and to establish for each of them one fixed, uniform character, is altogether a mistake; and not only a mere mistake as regards names and other distinctions, but one which has led to a plodding, mechanical treatment of the respective Orders themselves, nothing being left for the Architect to do, so far as the Order which he employs is concerned, than merely to follow the example which he has selected,—in other words, merely to *copy* instead of *designing* by *imitating* his model with artistic freedom and spirit. Our view of the matter, on the contrary, greatly simplifies and rationalizes the doctrine of the Orders, and facilitates the study of them by clearing away the contracted notions and prejudices which have been permitted to encumber it; and owing to which, mere conventional rules, equally petty and pedantic, have been substituted for intelligent guiding maxims and principles.

Having thus far briefly explained the rationale of the Orders

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with regard to the division of them into three leading *classes*, each of which, distinct from the other two, yet comprises many varieties or *species*,—which, however much they may differ with respect to minor distinctions, all evidently belong to one and the same style, or what we call Order,—we have now to consider their constituent parts, that is, those which apply to every Order alike. Hitherto it has been usual with most writers to treat of an Order as consisting of three principal parts or divisions, viz. pedestal, column, and entablature. The first of these, however, cannot by any means be regarded as an integral part of an Order. So far from being an essential, it is only an *accidental* one,—one, moreover, of Roman invention, and applicable only under particular circumstances. The pedestal no more belongs to an Order than an attic or *podium* placed above the entablature. In the idea of an Order we do not include what is extraneous to the Order itself: it makes no difference whether the columns stand immediately upon the ground or floor, or are raised above it. They almost invariably are so raised, because, were the columns to stand immediately upon the ground or a mere pavement, the effect would be comparatively mean and unsatisfactory; the edifice would hardly seem to stand firmly, and, for want of apparent footing, would look as if it had sunk into the ground, or the soil had accumulated around it. With the view, therefore, of increasing height for the whole structure, and otherwise enhancing its effect, the Greeks placed their temples upon a bold substructure, composed of *gradini* or deep steps, or upon some sort of continuous *stylobate;* either of which modes is altogether different from, and affords no *precedent* for, the pedestal of modern writers. And here it may be remarked, that of the dignity imparted to a portico by a stylobate forming an ascent up to it in front, we have a fine example in that of St. George's Church, Bloomsbury, which so far imitates the celebrated Maison Carrée at Nismes. Nevertheless, essential as some sort of stylobate is to the edifice itself, it does not properly belong to the Order, any

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more than that equally essential—in fact, more indispensable part—the roof.

It is not without some regret that we abandon, as wholly untenable, the doctrine of the pedestal being an integral part of an Order: it would be so much more agreeable to say that the entire Order consists of three principal divisions, just the same as each of the divisions themselves. As regards the entire structure, such triplicity, that of 'beginning, middle, and end,' was observed. For 'beginning,' there was substructure, however denominated, or whether expressly denominated at all, or not; for 'middle,' there were the columns; and for 'end' or completion, the entablature. For the whole of a structure, there is or ought to be such 'beginning, middle, and end;' but from the Order itself we exclude one of them, as not being dependent upon it either for character or treatment.

The pedestal being discarded as something apart from the Order itself, the latter is reduced to the two grand divisions of column and entablature, each of which is subdivided into three distinct parts or members, viz. the column, into *base, shaft,* and *capital;* the entablature, into *architrave, frieze,* and *cornice;* so that the latter is to the entablature what the capital is to the column, namely, its crowning member,—that which completes it to the eye. Yet, although the above divisions of column and entablature hold good with regard to the general idea of an Order, the primitive Greek or Doric one does not answer to what has just been said, inasmuch as it has no base, —that is, no mouldings which distinctly mark the foot of the column as a separate and ornamented member. Hence it will perhaps be thought that this Order is not so complete as the others, since it wants that member below which corresponds with the capital above. Still the Grecian Doric column is complete in itself: it needs no base,—in fact, does not admit of such addition without forfeiting much of its present character, and thus becoming something different. Were there a distinct base, the mouldings composing it could not very well

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exceed what is now the lower diameter or actual foot of the column; because, were it to do so, either the base would become too bulky in proportion to the capital, or the latter must be increased so as to make it correspond in size with the enlarged lower extremity. Even then that closeness of *intercolumniation* (spacing of the columns), which contributes so much to the majestic solidity that characterizes the genuine Doric, could not be observed; for unless the columns were put considerably further apart, the bases would scarcely allow sufficient passage between them. The only way of escaping from these objections and difficulties is by making the shaft of the column considerably more slender, so that what was before the measure of the lower diameter of the shaft itself, becomes that of the base. That can be done,—at least something like it has been done; but the result is an attenuated Roman or Italian Doric, differing altogether in proportions from the original type or Order. The shaft no longer tapers visibly upwards, or, what is the same thing, expands below.

Before we come to speak of the Orders severally and more in detail, there are some other matters which require to be noticed; one of which is the origin of the Greek system of columniation, or the prototype upon which it was modelled. Following Vitruvius, nearly all writers have agreed to recognize in the columnar style of the ancients the primitive timber hut, as furnishing the first hints for and rudiments of it. Such theory, it must be admitted, is sufficiently plausible, if only because it can be made to account very cleverly for many minor circumstances. Unfortunately, it does not account at all for, or rather is in strong contradiction to, the character of the earliest extant monuments of Greek architecture. Timber construction would have led to very different proportions and different taste. Had the prototype or model been of that material, slenderness and lightness, rather than ponderosity and solidity, would have been aimed at; and the progressive changes in the character of the Orders would have been reversed, since the earliest of them all would also have been the

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lightest of them all. The principles of stone construction have so evidently dictated and determined the forms and proportions of the original Doric style, as to render the idea of its being fashioned upon a model in the other material little better than an absurd though time-honoured fiction. Infinitely more probable is it, that the Greeks derived their system of architecture from the Egyptians; because, much as it differs from that of the latter people with regard to taste and matters of ornamentation, it partakes very largely of the same *constitutional* character. At any rate the doctrine of a timber origin applies as well to the Egyptian as to the Hellenic or Grecian style. Indeed, if there be anything at all that favours such doctrine, it is, that construction with blocks of stone would naturally have suggested *square* pillars instead of round ones; the latter requiring much greater labour and skill to prepare them than the others. But, as their pyramids and obelisks sufficiently testify, the most prodigal expenditure of labour was not at all regarded by the Egyptians. That, it will perhaps be said, still does not account for the adoption of the circular or cylindrical form for columns. We have therefore to look for some sufficiently probable motive for the adoption of that form; and we think that we find it in *convenience*. In order to afford due support to the massive blocks of stone placed upon them, the columns were not only very bulky in proportion to their height, but were placed so closely together, not only in the fronts of porticoes, but also within them, that they would scarcely have left any open space. Such inconvenience was accordingly remedied by making the pillars round instead of square. Should such conjectural reason for the adoption of circular columns be rejected, it is left to others to propound a more satisfactory one, or to abide, as many probably will do, by the old notion of columns being so shaped in order to imitate the stems of trees. It is enough that whatever accounts for the columns being round in Egyptian architecture, accounts also for their being the same in that of the Greeks.

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Among other fanciful notions entertained with regard to columns and their proportions, is that of the different orders of columns being proportioned in accordance with the human figure. Thus the Doric column is said to represent a robust male figure, and those of the two other Orders, female ones,—the Ionic, a matron; the Corinthian, a less portly specimen of feminality. Now, so far from there being any general similitude between a Grecian Doric column and a robust man, their proportions are directly opposite,—the greater diameter of the column being at its foot, while that of the man is at his shoulders. The one tapers *upwards*, the other *downwards*. If the human figure and its proportions had been considered, columns would, in conformity with such type, have been wider at the top of their shafts than below, and would have assumed the shape of a terminus,* or of a mummy-chest. With regard to the other two Orders, it is sufficient to observe, that if so borrowed at all, the idea must have been preposterous. We happen to have a well-known example of statues or human figures, and those, moreover, female ones, being substituted for columns beneath an entablature; and so far are they from confirming the pretended analogy between the Ionic column and the proportions of a female, that they decidedly contradict it, those figures being greatly bulkier in their general mass than the bulkiest and stoutest columns of the Doric Order. At any rate, one hypothesis might satisfy those who will not be satisfied without some fancy of the kind, because two together do not agree: if columns originated in the imitation of stems of trees, we can dispense with the imitation of men and women, and *vice versâ*.

Some may think that it is hardly worth while to notice such mere fancies; yet it is surely desirable to attempt to get rid of them by exposing their absurdity, more especially as they

* The species of statue so called, and consisting of the upper part of a human figure growing out of a pedestal which tapers downwards, and appears to enclose the rest of the body. See the remarks in the Appendix concerning Anthropostylar pillars, &c.

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still continue to be gravely brought forward and handed down traditionally by those who write upon the Orders, or who, if they do not actually *write*, repeat what others have written. It is worth while to clear away, if possible, and that, too, at the very outset of the study, erroneous opinions, prejudices, and misconceptions. We do not pretend to explain and trace, step by step, the progress of the Doric Order, and of the columnar system of the Greeks, from their first rudiments and formation. We have only the results of such progressive development or formation; of the actual formation itself we neither know nor can now ever know anything; nor should we be a whit the wiser, at least not a whit the cleverer—which is, after all, the main point of all, if we did. The utmost that can now be done is to take the results themselves, and from them to reason backwards to causes and motives. Adopting such a course, we may first observe, that there is a very striking and characteristic difference between Egyptian and Grecian taste and practice in one respect: in the former style the columns are invariably *cylindrical*, or nearly so,—in the other they are *conical*, that is, taper upwards, and in some instances so much so, that were they prolonged to double their height, they would be almost perfect cones, and terminate like a spire. This tapering greatly exceeds that of the stems of trees, taking for their stem the trunk, from above which the branches begin to shoot out. It appears to have been adopted for purely artistic reasons, certainly not for the sake of any positive advantage, since the diminution of the shaft, and the great contraction of the diameter just below the capital, must rather decrease than at all add to the strength of the column. What, then, are the artistic qualities so obtained? We reply, —variety and contrast, and the expression of strength without offensive heaviness. The sudden or very perceptible diminution of the shaft—it must be borne in mind that our remarks refer exclusively to the original Greek style or Doric Order—produces a double effect; it gives the column an expression of greater stability than it otherwise would possess, combined

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with comparative lightness. What is *diminution* upwards, is also *expansion* downwards; and similar difference and contrast take place also with respect to the intercolumns, although in a reverse manner, they being wider at top than at bottom. So far the principle of contrast here may be said to be twofold, although one of the two sorts of contrast inevitably results from the other. Were it not for the great diminution of the shaft, the columns would appear to be too closely put together, and the intercolumns much too narrow, that is, according, at least, to the mode of intercolumniation practised by the Greeks in most of their structures in the Doric style; whereas such offensive appearance was avoided by the shaft being made considerably smaller at top than at bottom,—consequently the intercolumns wider above than below, in the same ratio; so that columns which at their bases were little more than one diameter apart, became more than two, that is, two upper diameters apart at the top of their shafts, or the neckings of their capitals. In this style everything was calculated to produce a character of majestic simplicity,—varying, however, or rather progressing, from heaviness and stern severity to comparative lightness of proportions,—for examples differ greatly in that respect: in some of the earlier ones the columns are not more than four diameters in height, while in some of the later they are upwards of six, which last-mentioned proportions not only amount to slenderness, but also destroy other proportions. The capital itself may be proportioned the same as before, relatively to the diameter of the column, but it cannot possibly bear the same ratio as before to its height. The average proportions for that member are one diameter for its width at its abacus, and half a diameter for its depth: consequently, if the entire column be only four diameters in height, the capital is $\frac{1}{4}$th of it, or equal to $\frac{1}{4}$th of the shaft; whereas, if the column be six or more diameters, the capital becomes only $\frac{1}{12}$th of the column, or even less, so that the latter appears thin and attenuated, and the other member too small and insignificant. Yet

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though the original Greek Order or style exhibits considerable diversity with respect to mere proportions, it was otherwise very limited in its powers of expression, and moreover something quite distinct from the nominal Doric of the Romans and the Italians, as will be evident when we come to compare the latter with it.

Before we enter upon this part of our subject, and previous to an examination of the details of the several Orders, it should be observed that the diameter, that is, the *lower* diameter of the column, is the standard by which all the other parts and members of an Order are measured. The diameter is divided into 60 *minutes*, or into two halves or *modules* of 30 minutes each; and those minutes are again subdivided into parts or *seconds* when extreme accuracy of measurement is required; which two last are noted thus: 5′ 10″, for instance, meaning five minutes and ten seconds.

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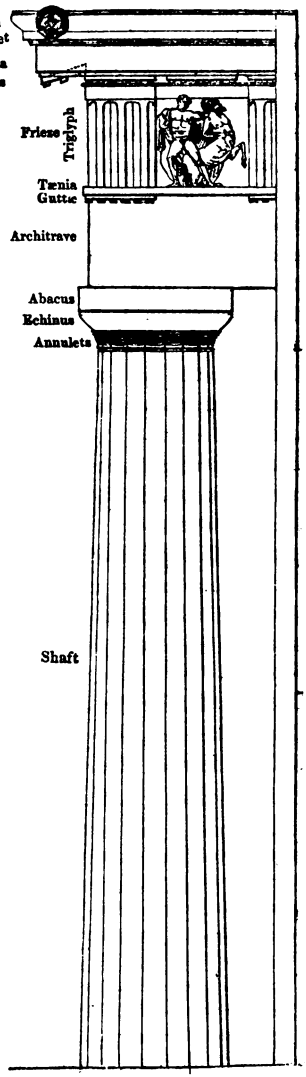
DORIC ORDER.



It has been already observed, that in the genuine Doric the column consists of only shaft and capital, which latter is composed of merely an *echinus* and *abacus*, the first being a circular convex moulding, spreading out beneath the other member, which, although a very important one, is no more than a plain and shallow square block upon which the architrave rests,* not only firmly

* If we may venture to point out a resemblance that will be deemed not a little derogatory, though, nevertheless, indisputably exact, we may here observe that the shape of the Doric capital may be familiarly illustrated at the breakfast-table, by taking a common tea-saucer, and placing upon it a thick piece of bread, cut square to the diameter of the saucer. The similarity of forms is most striking; nor, were any convenience to be gained by it, would there be any great objection to distinguish capitals of that kind as belonging to the *saucer* class, for we make no scruple of applying the term *lancet* to one species of Gothic. Both in our own and other languages there are many architectural terms which, were they now brought up for the first time, might be objected to as being borrowed from very insignificant, if not also vulgar objects. In the architec-

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and safely, but so that the utmost expression of security is obtained, and pronounced emphatically to the eye. Such expression arises from the abacus being larger than the *soffit* or under-surface of the architrave itself; and as the former corresponds, or nearly so, with the lower diameter of the shaft, it serves to make evident at a glance that the foot of the column is greater than the soffit of the architrave placed upon the columns. Thus, as measured at either extremity, the column is greater than the depth or thickness of the architrave, and projects beyond the architrave and general plane of the entablature. Now this would produce a most unsightly effect were the columns of the same, or nearly the same diameter throughout. In such case they would appear not only too large, but most clumsily so, and the entablature would have the look of being set back in the most awkward and most unaccountable manner. Instead of which, the architrave, and consequently the general plane of the whole entablature, actually overhangs the upper part of the shaft, in a plane about midway between the smallest diameter of the column, just below the capital and the face of the abacus. Even this, the overhanging of the entablature, would be not a little offensive to the eye, were the abacus no larger than the architrave is deep; whereas, being larger, it projects forwarder than the face of the architrave, thereby producing a powerful degree of one species of æsthetic effect, namely, contrast,—and if contrast, of course variety also; for though there may

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tural terminology of the Spaniards, *naranja* (orange), or *media naranja*, is very commonly employed to signify a dome; in that of the French, *cul de four*, *anse de panier*, *œil de bœuf*, and many others of an exceedingly homely stamp, are quite current and accredited. In our own we have 'saddle-backed,' 'cradle-vaulted,' 'horse-shoe arch,' and several besides, which are more significant than elegant; and we even go so far as to distinguish one of the most elegant carved Greek mouldings by the name of the 'egg and tongue.' What harm, or what of insult, would there be in speaking of Doric capitals as those of the 'saucer,' and Corinthian ones as those of the 'vase' or 'pot' class?

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be variety without contrast, there cannot be contrast without variety. Another circumstance to be considered is, that were not such projection beyond the face of the architrave given to the abacus, that and the rest of the capital could not correspond with the foot of the shaft, and thus equalize the two extremities of the entire column. As now managed, all contradictions are reconciled, and the different sorts of contrast are made to contribute to and greatly enhance general harmony. In the outline of the column we perceive, first, contraction,—then expansion, and that in both directions,—for in like manner as the column diminishes upwards and the capital expands from it, its shaft may be said to expand and increase in bulk downwards, so as to agree with the abacus or upper extremity.

Though a few exceptions to the contrary exist, the shaft of the Doric column was generally what is technically called *fluted*, that is, cut into a series of channels touching each other, and thus forming a series of ridges upon its surfaces,—a mode of decoration, we may observe, altogether the reverse of that which was practised by the Egyptians, some of whose columns exhibit, instead of channels or hollows, a series of convex mouldings that give them the appearance of being composed of very slender pillars or rods bound together. Many have attempted, with perhaps pains-taking but idle inquiry, to account for the origin of such fluting or channeling,—supposing, among other things, that it was derived from the cracks and crevices in the stems of trees, or from the streakings occasioned by rain on the shafts of the columns. Most perverse ingenuity! We do not find anything like such marked streakings on columns, even in this rainy English climate of ours; much less would they have been at all visible in such a climate as that of Greece. Others have supposed that these channels were at first intended to hold spears! that is, to prevent them from slipping and falling down when set up against a column; than which idea it is hardly possible for the utmost stretch of ingenuity to go further in absurdity.

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We, who are less ambitious, content ourselves with supposing that the fluting of columns was introduced and adopted principally for the sake of effect. If other motives for doing so existed, we know them not, nor need we care, since study of effect alone suffices to account for such mode of decoration. By multiplying its surfaces, fluting gives variety to the shaft of the column, and prevents it from showing as a mere mass. With the same, or very nearly the same bulk and degree of solidity as before, it causes the column to appear much less heavy than it otherwise would do, and contributes to a pleasing diversity of light and shade, reminding us of Titian's 'bunch of grapes.' Being upon a curved surface, the channels serve to render the circularity of the column more apparent, since, though they are all of the same width, they show to the eye narrower and narrower on each side of the centre one,—no matter in what direction the column is viewed. Here then we have variety combined with uniformity, and a certain apparent or optical irregularity with what we know to be perfect regularity.

In the Doric Order, the number of channels is either sixteen or twenty,—afterwards increased in the other Orders to twenty-four; for they are invariably of an even number, capable of being divided by four; so that there shall always be a centre flute on each side of the column, that is, in a line with the middle of each side of the abacus. Doric flutings are much broader and shallower than those of the Ionic or Corinthian Orders;—broader for two reasons,—first, because they are fewer in number; and secondly, because there are no *fillets* or plain spaces left between them upon the surface of the shaft. Their proportionably much greater shallowness, again, may be accounted for equally well: were the channels deeper, not only would they seem to cut into the shaft too much, and weaken it, but also produce much too strong shadows; and another inconvenience would be occasioned, for the *arrises* or ridges between the channels would become very sharp and thin, and liable to be injured. The mode of

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fluting Doric columns with mere arrises between the channels, instead of *fillets*, has been retained by the moderns as characteristic of the Order; but as the Order has been treated by them, it is little better than a mere distinction, with very little regard to general character. In the original Doric, almost every part is marked by breadth, or by flatness, or by sharpness. There are no curved mouldings or surfaces, except the *cymatium* of the cornice and the *echinus* of the capital, which last is generally kept exceedingly flat. The breadth and shallowness of the channels, and the flat curves in which they commence and terminate, are therefore in perfect keeping with the style in other respects; so also are the sharp arrises or ridges between the channels or flutings on the surface of the shaft, they being expressive of a severe simplicity. The same remark applies to the horizontal annular narrower channels or incisions immediately beneath the echinus of the capital, and lower down, which last are just the reverse of the projecting astragal or convex moulding given to the Doric capital by the moderns. Why such horizontal channels or grooves should have been cut in the very thinnest and weakest part of the column, where they diminish instead of adding to strength, it is not easy to say, except that they were merely for the sake of effect,—of producing shadow, and increasing the proportions of the capital, to which they seem to belong. We leave others, should any be so disposed, to object that the lowermost groove or grooves, as the case may be, give the capital the appearance of being a separate piece, merely joined on to the shaft, without such joining being concealed. Looking at it differently, we will rather say that such groove is intended to mark to the eye the commencement of the capital, the portion above it of the shaft being thereby converted into the *hypotrachelium* or necking of the capital itself, which is thus enlarged in appearance, without being actually increased, and rendered unduly heavy. It is not, however, every example of the Order that has such necking: while in some the groove separating the capital from

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the shaft is diminished to a mere line,—which looks like a joining not intended to show itself,—in others it is omitted altogether. With respect to the *echinus*, we have little more to remark than that its office—which it performs admirably—is, by expanding out, to connect the diminished upper end of the column with the overhanging abacus; and the former being circular and the latter square, but adapted to each other in size, a beautiful combination is produced of a circle inscribed within a square; and the result is variety, contrast, and harmony. In its profile or *section*,—by which latter term is understood the contour of any moulding or other member,—it is usually very flat, little more than a portion of a cone (turned downwards), with scarcely any perceptible degree of convexity, except just beneath the abacus, where it is suddenly rounded and diminished, so that the abacus does not seem to press upon or compress it too much.

We arrive now at the entablature, the first or lowermost division of which, the architrave, otherwise called by the Greek name of *epistylium* (from ἐπὶ upon, and στύλος column), is no more than a plane surface whose height, including the *tænia* or fillet which finishes it and separates it from the frieze, is equal to the upper diameter of the column. Such, at least, may be considered its standard proportion, that by means of which it conforms to and harmonizes with the column itself. The second or middle division of the entablature, namely, the frieze, constitutes in the Doric style a very characteristic feature of the Order, being invariably distinguished by its triglyphs and metopes. The former of these are upright channeled blocks, affixed to or projecting from the frieze, and are supposed to have been originally intended to represent the ends of inner beams laid upon the architrave transversely to it. The *metopes*, on the contrary, are not actually architectural members, but merely the intervals or spaces between the triglyphs; so that without the latter there could not be the others, because it is the triglyphs which

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produce the metopes. With slight variations in different examples, the frieze is of about the same height as the architrave,—a trifle less, rather than more; and the average proportion for the breadth of the triglyphs is the mean diameter of the column, or that taken midway of the shaft. The face of the triglyph has two *glyphs* or channels carved upon it, and its edges beveled off into a half-channel, thus making what is equal to a third glyph, whence the name triglyph, or *three-channeled*. We have till now reserved speaking of what, although it shows itself upon the architrave, belongs to the triglyph, and is in continuation of it, namely, the fillet and *guttæ* attached to the tænia of the architrave immediately beneath each triglyph, and corresponding with it in width. These small conical guttæ or *drops* are supposed, rather whimsically, by some to represent drops of rain that have trickled down the channels of the triglyph, and settled beneath the ledge of the architrave. Others suppose them to have been intended to indicate the heads of nails, screws, or studs. Leaving all such suppositions to those anile and, *à-nous*, very old-ladyish or very young-ladyish persons who have a taste for them, we will be satisfied with discerning artistic intention and æsthetic effect. That member of the triglyph—for such we must be allowed to consider it—is of great value, serving, as it does, to impart somewhat of decoration to the architrave, to break the monotony of the otherwise uninterrupted line of the tænia, and to connect, to the eye at least, the architrave and frieze together. Although in a much fainter degree, the architrave is thus made to exhibit the same system of placing ornamental members at regular distances from each other, as is so energetically pronounced in the frieze itself. It it be asked why the same, or something equivalent to it, was not extended to the architrave in the other Orders, our answer is, because a similar motive for doing it does not exist. The triglyph being suppressed in the Ionic and Corinthian friese, the accompanying guttæ beneath it were of necessity omitted also, otherwise they would have made evident that the triglyph

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ought to have been shown likewise. There is, indeed, one example, the monument of Thrasyllus, of a Grecian Doric entablature, whose frieze is without triglyphs (wreaths being substituted for them), and the guttæ are nevertheless retained. But how?—instead of being placed at intervals, as if there were triglyphs, they are continued uninterruptedly throughout, so that the idea of triglyph disappears; besides which the example here referred to is altogether so anomalous and exceptional as to be not so much a specimen of the Doric *Order* as of the Doric *style*, modified according to particular circumstances; on which account it is highly valuable, since we may learn from it that where peculiar circumstances required, at least admitted of, peculiar treatment, the Greeks did not scruple to avail themselves of the liberty so afforded.

With regard to the arrangement of the triglyphs, one is placed over every column, and one or more intermediately over every *intercolumn* (or space between two columns), at such distance from each other that the metopes are square; in other words, the height of the triglyph is the measure for the distance between it and the next one. In the best Greek examples of the Order there is only a single triglyph over each intercolumn, whence that mode is sometimes called *monotriglyphic* or single-triglyphed intercolumniation; which is the closest of all, the distance from axis to axis of the columns being limited to the space occupied above by two metopes and two triglyphs, *i. e.* one whole triglyph and two halves of triglyphs. In such intercolumniation the number of the triglyphs is double the number of the columns, minus one. Further, it is evident that as there must be a triglyph over every column, the triglyphs must regulate the intercolumniation. The width of the intercolumns cannot be at all less than the proportion above mentioned; neither can it be increased, except by introducing a second triglyph,—and if a second triglyph, a second metope also, over each intercolumn, thus augmenting the distance between the columns to half as

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much again, which becomes, perhaps, too much, the difference between that and the other mode being considerably more than the diameter of a column; whereas in the other Orders the intercolumns may be made, at pleasure, either a little wider or a little narrower than usual. One peculiarity of the Grecian Doric frieze is, that the end triglyphs, instead of being, like the others, in the same axis or central line as the columns beneath, are placed quite up to the edge or outer angle of the frieze. In itself this is, perhaps, rather a defect than the contrary, although intended to obviate another defect—that of a half-metope or blank space there,—for it produces not only some degree of irregularity, but of æsthetic inconsistency also, the triglyph so placed being, as it were, on one side of, instead of directly over the column. One advantage attending it is, that the extreme intercolumns become in consequence narrower than the others by half a triglyph, and accordingly a greater degree and expression of strength are given to the extremities of a portico.

The Doric *Cornice.*—The third and last division of the entablature which remains to be considered is, although exceedingly simple, strongly characteristic, and boldly marked. With regard to its proportions, it is about a third or even more than a third less than the other two, and may itself be divided into three principal parts or members, viz. the *corona*, with the *mutules* and other *bed-mouldings*, as they are termed, beneath it and the *epitithedas* above it. The mutules are thin plates or shallow blocks attached to the under-side or soffit of the corona, over each triglyph and each metope, with the former of which they correspond in breadth, and their soffits or under-surfaces are wrought into three rows of *guttæ* or drops, conical or otherwise shaped, each row consisting of six guttæ, or the same number as those beneath each triglyph. Nothing can be more artistically disposed; for in like manner as an intermediate triglyph is placed over every two columns, so is an intermediate mutule over every two triglyphs. The smaller members increase in number as they decrease in size;

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and in the upper and finishing part of the Order, the eye is led on horizontally, instead of being confined vertically to the lines indicated by the columns below. The corona is merely a boldly projecting flat member, not greatly exceeding in its depth the abacus of the capital; in some examples it is even less. The epitithedas, or uppermost member of the cornice, is sometimes a cymatium, or *wavy* moulding, convex below and concave above; sometimes an echinus moulding, similar in profile to the echinus of the capital. The cornice may be said to be to the entablature, and indeed to the whole Order, what the capital is to the column,—completing and concluding it in a very artistic manner. By its projection and the shadow which it casts, the cornice gives great spirit and relief to the entablature, which would else appear both heavy and unfinished. In the horizontal cornice beneath a pediment, the epitithedas is omitted, and shows itself only in the sloping or *raking* cornices, as they are called, along the sides of the pediment.

Antæ.—Pilasters, as well as columns, belong to an Order, and in modern practice are frequently substituted indifferently for columns, where the latter would be *engaged* or attached to a wall. In Grecian architecture, however, the *antæ*—as they are thus termed, to distinguish them from other pilasters,—are never so employed. They are never placed consecutively, or in any series, but merely as a facing at the end of a projecting wall, as where a portico is enclosed at each end by the walls forming the sides of the structure, in which case it is described as a portico *in antis*. Although they accompany columns, and in the case just mentioned range in the same line with them, antæ differ from them, inasmuch as their shafts are not diminished; for which reason their faces are not made so wide as the diameter of the columns, neither are their capitals treated in the same manner, as both shaft and capital would be exceedingly clumsy. The expanding echinus of the column-capital is therefore suppressed, and one or more very slightly projecting *fasciæ*, the uppermost of which is

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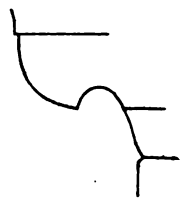
frequently hollowed out below, so as to form in section what is called the 'bird's beak' moulding, are substituted for it. In a portico *in antis* the want of greater congruity between the antæ and the columns is made up for by various contrasts. Flatness of surface is opposed to rotundity, vertical lines to inclined ones (those of the outline and flutings of the column), and uniformity, in regard to light, to the mingled play of light and shade on the shafts of the columns. Instead of attempting to keep up similarity as far as possible, the Greeks made a studied distinction between antæ and columns, not only in those respects which have been noted above, but carried difference still further, inasmuch as they never channeled the faces of their antæ, whereas the moderns flute their pilasters as well as columns. Hardly was such marked distinction a mere arbitrary fashion; it is more rational to suppose that it was adopted for sufficient æsthetic reasons and motives; nor is it difficult to account, according to them, for the omission of channeling on the shafts of antæ. Upon a plane surface the *arrises* between the channels would have occasioned an unpleasing harshness and dryness of effect, as is the case with fluted Doric pilasters, and would have been attended with monotony also, the lines being all vertical, and consequently parallel to each other; whereas in the column the channels diminish in breadth upwards, and all the lines are inclined, and instead of being parallel, converge towards each other, so that were the shaft sufficiently prolonged, they would at last meet in a common point or apex similar to that of a spire. Owing to this convergency, the lines on one side of a vertical line dividing the column, or rather a geometrical drawing or *elevation* of it, into two halves, instead of being parallel, are opposed to each other, like the opposite sides of an isosceles triangle; and this opposition produces *correspondence*.



PEDIMENT.—This very important feature of Grecian archi-

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tecture proves to us most convincingly that a figure which considered merely in itself, is generally regarded as neith beautiful nor applicable to architectural purposes, may b rendered eminently beautiful and satisfactory to the eye Reasoning abstractedly, it would seem that if such figure is to be made use of at all, the *equilateral* triangle would recommend itself in preference to any other, as being obviously the most perfect and regular of all triangles. For a pediment, however, such form would be truly monstrous; and yet even the equilateral triangle, nay, one of still loftier pitch, may, under some circumstances, become a pleasing architectural form, as we may perceive from pyramids and Gothic gables. How, then, is this seeming inconsistency or contradiction to be explained? It explains itself, if we merely reflect, as we ought to do, that in architecture, forms and proportions are beautiful not *positively* but only *relatively*. Were it not so, the same forms and proportions would be beautiful, and equally so under all circumstances, without any regard to purpose or propriety. It must also be taken into account that habit, custom, association of ideas, or prejudice, greatly influence our notions of architectural beauty. We are *prejudiced* in favour of the low Greek pediment, if for no other reason, because it is sanctioned by Greek authority and is according to Greek precedent. In all probability, had that people employed high-pitched instead of low-pitched pediments, we should, without inquiring further, have admired the former rather than the latter. What we have now to inquire is, why lowness of pitch for the pediment best agrees with the Greek system and its principles.

Notwithstanding that the pediment forms no part of the Order, since the latter is complete without it,—and in fact the pediment occurs only at the ends of a sloping roof, —the pediment must, when it does appear, be in accordance with the Order itself, or that front of the building which is beneath the pediment; consequently the pitch of the latter must be regulated by circumstances,—must be either greater

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or less, according to the proportions of the front itself. So far from being increased in the same ratio, the wider the front,—the greater the number of columns at that end of the building,—the lower must the pediment be kept, because the front itself becomes of *low proportions* in the same degree as it is extended or widened. Under all circumstances, the height of the pediment must remain pretty nearly the same, and be determined, not by width or horizontal extent, but by the *height* of what is beneath it. The height of the pediment or its *tympanum* (the triangular surface included between the horizontal cornice of the Order, and the two *raking* cornices of the pediment) never greatly exceeds the depth or height of the entablature; for were it to do so, the pediment would become too large and heavy, would take off from the importance of the Order, and appear to load its entablature with an extraneous mass which it was never calculated to bear.

We hardly need observe that it was, if not a constant, a very usual practice with the Ancients to fill in the whole of the tympanum of the pediment with sculpture, and also the metopes of the frieze, whereby the latter, instead of being mere blank spaces between the triglyphs, were converted into highly ornamental features. As far as mere display is concerned, there certainly cannot be a better situation for sculpture on an imposing scale than is the pediment crowning a portico or similar façade. Nevertheless, it is not free from inconvenience, the triangular shape of the tympanum or space itself necessarily cramping the freedom of sculptural composition, inasmuch as in every case the general arrangement must be the same, with a central figure, and the others arranged symmetrically on either side of it, and the extreme ones being of necessity forced into crouching or recumbent attitudes, whether there be motive for them or not.* The sculpture in the pediment over the octostyle portico of the British Museum

* See art. 'Pediment,' Rudimentary Dictionary of Terms; Weale's Series.

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is a less crowded composition than usual, and is remarkable as the first instance in this country of figures in full relief so applied, with a coloured background behind them; and further, having some of their attributes set off by gilding. But as no similar embellishment is applied to any other part of the architecture, the effect is so imperfect that it is difficult to judge what it would be, were such scheme of decoration to be fully carried out.*

MODERN DORIC.

Of the Roman and the modern varieties of this Order we shall treat much more briefly, because our remarks may be confined to comparison and the notice of differences. Certain it is that the original character of the Order was gradually lost sight of more and more, till at length it was converted into something quite different from its Greek type. The few circumstances in which Modern Doric, as we may call it, resembles the original one, are little more than the mode of fluting with *arrises* instead of fillets,—the general form of capital composed of echinus and abacus, and the triglyphs upon the frieze. The differences are, if not greater, far more numerous. The column became greatly elongated, being increased from six to eight diameters. The sunk annulets beneath the capital were omitted; and the capital was increased in depth by a distinct necking being given to it, divided from the shaft by a projecting moulding, which in that situation is called an *astragal*. The abacus, too, is made shallower, and has mouldings added to it. One of the greatest changes of all, as far as the column is concerned, is the addition of a base to it, which is partly both consequence and cause of the greater slenderness of the shaft; for were the shaft not reduced in

* One preposterous mode of disposing small statues or figures is of frequent occurrence in Gothic architecture, viz. that of placing a succession of them within the arch mouldings of the head of a doorway or portal, so that, although intended to represent upright attitudes, the uppermost ones become placed nearly horizontally.

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its lower diameter,—which is the same as being made more diameters in height,—the base added to it would enlarge the foot of the column too much: so again, on the other hand, were only the shaft decreased in thickness, without any mouldings for a base being added to it, that end of the column would be as much too small. The base best adapted to the Order, as being the most simple, though not uniformly made use of, is that which consists of merely a *torus*, or large circular and convex-sided block, and two shallow fillets above it. It may here further be noticed, that besides the base itself, or the base *proper*, the moderns have, for all the Orders alike, adopted an additional member, namely, a rather deep and square block, which, when so applied, is termed a *plinth;* and beneath this is frequently placed another and deeper one, called a *sub-plinth*. Contrary as this is to the practice of the Greeks, it is by no means an unwarrantable licence, for had no greater liberty been taken with the Orders and the modes of applying them, they would have remained comparatively quite pure. In apology for the plinth beneath a base, it may be said to produce a pleasing agreement between both extremities of the column,—in the Doric Order at least, where the square plinth beneath the circular torus of the base answers to the square abacus (which is itself another plinth, though differently named) placed upon the circular echinus of the capital.

Passing over several particulars which our confined limits will not permit us to notice, we may remark, that if greatly altered, not to say corrupted, from its primitive character, the Doric Order, as treated by the moderns, has been assimilated to the other Orders,—so much so as, though still differing from them in its details, to belong to the same general style. One advantage, if no other, of which is, that it may, should occasion require, be used along with the other Orders; whereas the original or Grecian Doric is so obstinately inflexible that it cannot be made to combine with anything else, or to bend to modern purposes. So long as a mere portico or

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colonnade, and nothing more, is required, backed by a wall unperforated by windows, its character and characteristic system of intercolumniation can be kept up, but no longer; or if it is to be done, it is more than has yet been accomplished. Nothing could be more preposterous, or show greater want of proper æsthetic feeling, or greater disregard of æsthetic principles, than the attempt to combine, as was done by Nash in the Park façade of Buckingham Palace, a Grecian Doric Order with a Corinthian one (in lieu of which we have now got a design *secundum artem*, *i.e.* manufactured to order, and showing consummate talent for architectural bathos, if no other). So totally irreconcileable are the two *styles*, that it was like placing Tudor or florid Perpendicular Gothic upon the early Lancet style. Besides, in that instance, the Doric, though affecting to be Greek, was depravated most offensively, as may still be seen in what is now left in the two low wings, the architrave and frieze being thrown together into one blank surface.

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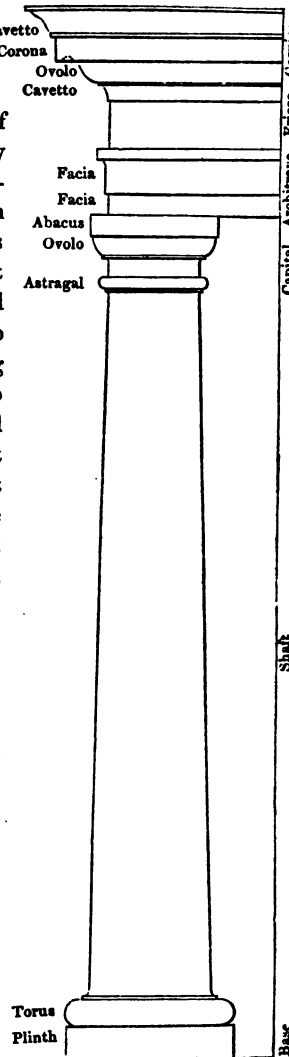
TUSCAN ORDER.

THIS, as already stated, is not entitled to rank as a distinct Order, being, in fact, nothing more than a simplified, if not a spurious and debased variety of the Doric. No authentic examples of it exist: it is known only from what Vitruvius says of it, following whose imperfect account, modern writers and architects have endeavoured to make out something answering to it. Yet what has been so produced is to all intents and purposes Doric, — though not Grecian Doric,—excepting that the shafts are unfluted and the frieze quite plain; which last circumstance, and much more, as has just above been intimated, is a mere trifling discrepancy, since not the triglyphs merely, but the frieze may, it seems, be omitted without thereby forfeiting the character of Doric for the Order. Though the Tuscan is spoken of, it is not practised. Almost the only example of what is called by that name in this country is Inigo Jones's portico of St. Paul's, Covent Garden, which, though not devoid of character and effect, is remarkable chiefly for the great width of the intercolumns, and the great pro-



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jection of its very shallow, and therefore too shelf-like cornice, which, if no other part, must be admitted to differ widely from the comparatively slightly projecting and massive Doric cornice. The Tuscan has, however, been treated differently by different architects, and some of them have given it what is merely a modification of the Doric cornice without its mutules. Their Tuscan becomes, in fact, very little more than a plainer sort of their own Doric, distinguished from it chiefly, and that only negatively, by the omission of triglyphs on the frieze. One thing which the Moderns have done, both in their Doric and their Tuscan, is to assimilate pilasters to columns, giving to the former precisely the same bases and capitals as the others have, and also generally diminishing their shafts in the same manner. Still all the differences here pointed out, together with many minor ones besides, do not constitute different Orders, unless they are to be multiplied by being subdivided into almost as many distinct Orders as there are varieties of one and the same class. All the Dorics and the Tuscan agree in having the *echino-abacus capital.* Therefore, if we want a quite different and distinct Order, we must turn, as we now do, to the *voluted-capital* class of columns, or that which bears the name of the

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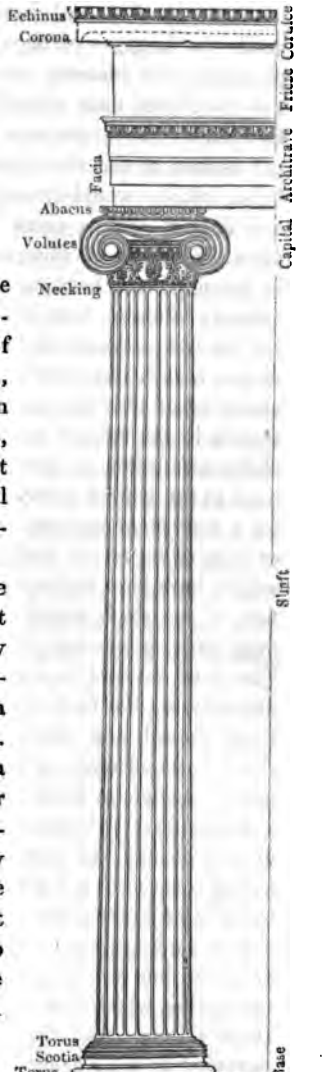
IONIC ORDER.

How this Order originated,—what first led to the adoption of volutes as a suitable decoration for the capital,—whether they were mere decoration, or were at first intended to express some meaning,—whether they were intentionally devised for the latter purpose, or grew out of some accidental hint,—must now be entirely matter of conjecture. Of one thing we may be quite certain, that the Order, as we now find it in the best, and best known, examples, was not struck out all at once, but must have passed through several stages till it was ultimately matured into perfection.

Although the capital is the *indicial* mark of the Order,—that by which the eye immediately recognizes and distinguishes it,—the entire column is of quite a different character from the Doric. Besides having the addition of a base, the shaft is of more slender or taller proportions, and consequently made much less visibly tapering; for if it diminished in the same degree as the Doric shaft does,—the Ionic being about two diameters longer,—the upper one would, in consequence of such tapering, become much too small; and a further consequence would



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be that the foot and base of the column would appear much too large, — perhaps clumsily so. Not knowing expressly to the contrary, we are at liberty to suppose that it was the altered form and character of the capital itself which first led to the formation of a base or series of mouldings at the bottom of the shaft, in order to produce such degree of finish below as would correspond with and *balance* the richness and flow of outline given to the capital. And it must be allowed that the swelling contours of the base are admirably in keeping, and harmonize with the play of curves in the volutes; whereas, were the shaft to stand immediately upon the floor or pavement without any base, as in the Doric Order, although such treatment is in perfect correspondence with the character of that echino-abacus Order, it would be just the reverse in the *voluted* one. There would be a harshness and abruptness below, in grating discord with the graceful flow of lines in the capital above. This feeling dictated the necessity for a corresponding base, which, although generally spoken of as an addition *to* the shaft, may with far greater propriety be said to have been *taken out of* it. Any actual addition to the foot of the shaft would have been the same as an enlargement of it, producing disproportion and therefore deformity. The most rational explanation therefore is, that the original diameter for the foot of the shaft was retained, but the foot itself shaped into mouldings, and the portion immediately above it pared away or reduced, so that the column became more diameters in height than before. That being done, and a distinct base so obtained, it was found necessary to make a further change, for the sharp arrises of the Doric mode of fluting occasioned a degree of harshness quite at variance with the greater delicacy aimed at in other respects. Those arrises were accordingly converted into *fillets*, which are not actual members, but merely spaces left between the channels or flutes themselves, which last are consequently narrower than in the Doric column; and their comparative narrowness is further increased by their being augmented in number, from that of

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twenty to twenty-four. Thus the change from the Doric to the Ionic column may be accounted for, rationally at least, and æsthetically, if not historically. We do not, indeed, profess to know and determine the actual origin of the volutes of the capital, and therefore leave those who put faith in Vitruvius to believe, if they can, that they were derived from the imitation of the curls in a lady's head-dress; or, as others will have it, that the idea was borrowed either from rams' horns, or the slender and flexile twigs of trees placed upon the capital for ornament. We also leave those who are not satisfied with our way of accounting for the base given to the Ionic column to fancy that this member was intended to imitate the ancient *chaussure* or sandal.

The Ionic capital is far more complex than that of the Doric, and not only more complex, but more irregular also: instead of showing, like the other, four equal sides, it exhibits two faces or fronts parallel to the architrave above it, and two narrower *baluster* sides, as they are termed, beneath the architrave. Some consider this irregularity a defect, which, if such it be, is to be got over only by either turning the volutes diagonally, as in some Roman and modern examples, or by curving concavely the faces of the capital, instead of making them planes, so as to obtain four equal faces or sides, as is done in the capitals of the inner Order of the Temple of Apollo at Bassæ. At least that method, and the other one of turning the volutes diagonally, are the only methods that have been practised for giving perfect regularity to the Ionic capital by means of four equal faces; for, although difficult, it is possible to accomplish the same purpose differently, by making the abacus quite square, as in the Doric Order, and letting the volutes grow out of it on each side or face, their curvature commencing not on the upper horizontal edge, but descending from the vertical edges of the abacus. In fact, the volutes might be fancied to have originated in a prolonged abacus, first falling down on each side beneath the architrave, and then coiled up on the back and front of the column for the two

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faces, which thus became greater in width; after which a smaller ornamental abacus was introduced as a crowning member, immediately beneath the architrave. As it is now treated, the great extent of the two flat voluted faces prevents the capital from being square. Let us endeavour to explain this: as average measurement, we may put down 50 minutes, or 10 less than the lower diameter, for that of the upper diameter of the shaft; 65 for the sides of the abacus; from 56 to 60 for the soffit of the architrave, which last accordingly overhangs the upper part of the shaft; and 90 minutes, that is, three modules, or a diameter and a half, for the faces of the capital, measured across the volutes. Now, were the capital square—as deep from back to front as it is wide in front,—its bulk would be excessive, and out of proportion with the column and other parts of the Order, and inconsistent with the delicacy aimed at in all respects. The mere *lateral* expansion of the capital, on the contrary, as viewed in front, does not occasion any appearance of heaviness,—rather that of richness; more especially as the bulk is greatly diminished by the following ingenious expedient. Instead of the *baluster side* being made cylindrical by being kept of the same diameter throughout, and equal to the face of the volute, it is gradually diminished from each face; so that the side of the capital thus becomes in a manner hollowed out; and not only that, but great play of form is imparted to it, and its curvature both contrasts and harmonizes with the curves of the volutes themselves. If there be not the same completeness with respect to uniformity in all the four sides as is obtained in the Doric and Corinthian capitals, at any rate the most admirable artistic contrivance and propriety are exhibited. Nevertheless, a writer of some notoriety, viz. Mr. John Ruskin, calls the Ionic capital 'a base invention;' yet as he sees perfect loveliness in those two Hecubas of architecture, St. Mark's Church and the Ducal Palace, at Venice, his equally unqualified and dogmatic censure of the Greek voluted capital partakes more of compliment towards it than it does of insult.

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The only thing to be objected against the Ionic capital is, that in the end columns of a portico the form of capital just described occasioned obvious if not offensive irregularity, because on the return or side of the building the baluster side showed itself beneath the face of the architrave: yet even this was of little consequence if there was merely a single row of columns in front; but where the colonnade was continued along the flanks of the building also, a very unsightly sort of irregularity was produced; for while all the other columns on those flanks showed the faces of their capitals, the end one would show its baluster side. Here then a difficulty presented itself that demanded some ingenuity to overcome it, and hardly can we sufficiently admire the happy expedient by which it was surmounted. It was necessary to give the capital at the angle two adjoining voluted faces, so that it should agree with those of the other columns both in front and on the flank of the building. This was accordingly effected by placing the volute at the angle, diagonally, so as to obtain there two voluted surfaces placed immediately back to back,—a most happy and simple contrivance, which, now that it has been applied, every one is at liberty to fancy he could have found out for himself. Nevertheless it is not every one that approves of it, for there are some who affect to regard that disposition of the volute at the angle as a defect. If it be strictly considered merely in itself, it may, perhaps, be objected to such capital that in itself it is irregular, one of the volutes in each of its faces being turned obliquely and foreshortened, while the other volute in the same face is seen directly in front, as in all the other capitals. Yet surely such partial and trifling irregularity may very well be excused, instead of being imputed as a defect, since it obviates far greater irregularities, and contributes so effectively to general harmony and symmetry. At all events, it is incumbent upon those who make the objection to show how much better they could have managed matters. So far are we from objecting to it, that we do not see why the same diagonal disposition of the

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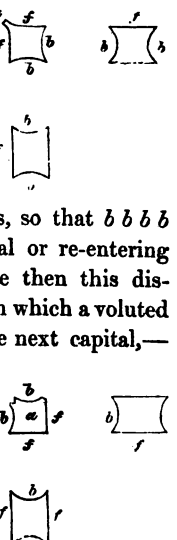
volutes should not, *occasionally* at least, be employed for all the capitals alike, thereby giving them, although in all other respects perfectly Greek as to style, four uniform faces, as in some of the Roman and Italian examples of the Order.

How little modern Architects are capable of modifying the Ionic capital, and adapting it to particular circumstances, may be seen in the colonnades of the façade of the British Museum, where, at the re-entering or internal angle formed by colonnades at right angles to each other, the column at the angle has two adjoining voluted faces given to it; but as a re-entering or inner angle is circumstanced quite differently from an external one, the consequence is that each of those faces falls opposite the baluster side of the columns ranging with it either way. We explain this briefly in two simple diagrams, in which *f* indicates the face or voluted side of the capital, *b* the baluster side, and *a* the projecting volute turned diagonally at the angle. In an external angle, or the return of a portico, the faces and sides are arranged thus, so that *b b b b* come opposite each other; but in an internal or re-entering angle, the reverse takes place; for we have then this disposition of the faces and sides of the capitals, in which a voluted face comes opposite to the baluster side of the next capital,—a most unsightly irregularity, and one all the more unpardonable because it could have been got over, if in no other way, by converting that column (*a*) into a square pillar, which would, besides, give greater strength, or the expression of it, where such expression is very desirable.



If these observations on the Ionic capital seem to detain us too long, we cannot help it: they are nothing less than indispensable for a proper understanding of its nature, and the peculiarity of circumstances attending it. What remains to be observed is, that owing to its com-

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plexity, that capital admits of very great diversity of character and decoration. It is sometimes without, and sometimes has a necking to it, which may either be plain or decorated, as may best accord with the particular expression, either as to richness or quiet simplicity, which is aimed at as the characteristic of the entire design. The capital may be modified almost infinitely in its proportions; first, as regards its general proportion to the column; secondly, as regards the size of the volutes compared with the width of the face. In the best Greek examples the volutes are much bolder and larger than in those of the Roman and Italian, in some of which they are so greatly reduced in size, and become consequently so far apart from each other, as to be insignificant in themselves, and give the whole capital an expression of meagreness and meanness. The *spirals* forming the volute supply another source of variety, since they may be either single or manifold. In what is called the Ilissus Ionic capital there is only a single spiral, or *hem*, whose revolutions form the volute, which mode, indeed, prevails in all the Roman and modern Ionics; but in the capitals of the Temple of Erechtheus at Athens, there are, besides that principal spiral, other intermediate ones which follow the course of its revolutions. Again, the *cathetus*, or eye of the volute, where the spiral or spirals terminate, admits of being made smaller or larger. It is, besides, sometimes flat, sometimes convex, and occasionally carved as a *rosette*. All these variations are independent of the general composition of the capital, and though not all equally good, they both suggest and authorize other modifications of the Ionic type, and fresh combinations.

One exceedingly interesting example, highly valuable as suggestive study,—one quite *sui generis*, and perhaps on that account viewed with more of prejudice than relish,—is the internal Order of the Temple of Apollo at Bassæ, delineated and described by Mr. T. L. Donaldson, in the supplementary volume to Stuart's 'Athens.' This example, which seems to have found favour only in the eyes of Mr. C. R. Cockerell, who has employed it on more than one occasion, has, as already inti-

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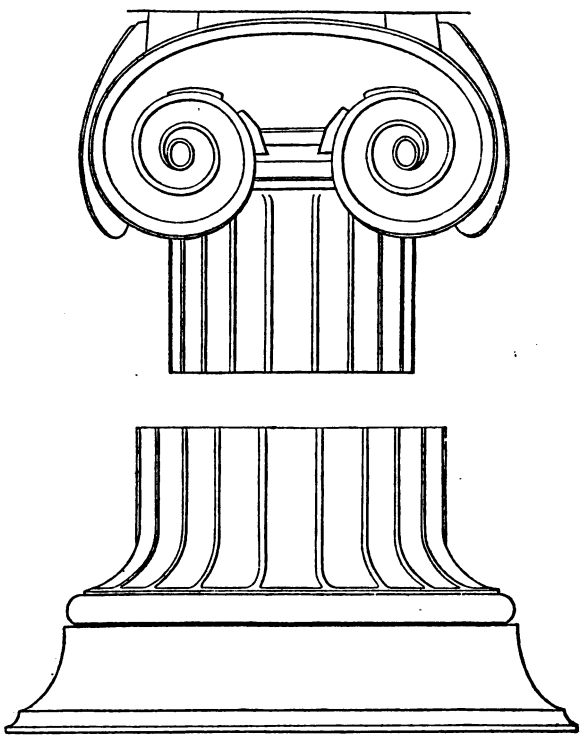
mated, four similar faces; yet if it so far agrees with many Roman and modern Ionic capitals, it differs from them totally in every other respect. While the faces of the latter are formed rather by merely *sticking on* the volutes diagonally, instead of *turning* them, so in the example now under notice each face may be said to be arched, since it curves downwards on each side from the middle of its upper edge, instead of being there straight or horizontal beneath the architrave.



Owing to this circumstance the faces of the capital have the look of being rather affixed to than properly connected with

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the abacus, and there is a certain degree of incongruousness and want of finish. So far, then, there is room for improvement, and perhaps in some other respects also; yet upon the whole there is much to approve of and admire in this capital, among whose peculiarities it deserves to be noted that the space between the volutes is not above half the width of the volutes themselves. Nor is it for its capital alone that this example of the Order is remarkable, its base being equally peculiar, on account of its simplicity of form, and still more so, perhaps, on account of its very great expansion, spreading out below to considerably more than two upper diameters of the shaft; which perhaps causes the capital to appear rather too small in comparison with it. This base is all the more remarkable because it differs entirely from what is called the *Ionic base*, although not employed by the European Greeks for that Order, who made use of what is styled the *Attic base*, consisting of two *tori* and a *scotia*, or deep curved hollow, between them. The proper Ionic base, or what is so called, differs from every other form of that member, being greatly contracted in its lower mouldings, which, if not a deformity, is not a particular beauty, as it gives the base too much the appearance of being reversed or turned upside down; and hence it is difficult to assign any probable or sufficient motive for such conformation of mouldings in the foot of a column. Perhaps the only modern instance of the application of that base occurs in the *tetrastyle* (*four*-columned) portico of Hanover Chapel, Regent Street, whose Order is copied from the Temple of Minerva Polias at Priene, in Asia Minor; to which example we shall presently have occasion to refer again when we come to speak of the Ionic entablature. Before so doing we have to call attention to another peculiarity in the columns within the Temple at Bassæ, whose base is above shown: we allude to the mode in which the shafts are fluted, which seems to indicate a transition from the Doric to the Ionic style, the fillets being exceedingly narrow, and the channels shallow and very slightly curved, which gives the shaft

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altogether a different character from that attending the usual mode of fluting practised for this Order.

Although it is a modern composition, derived from the study of Greek fragments, yet certainly not on that account the less meritorious than if it were an express copy from some one particular example, we may be allowed to speak of the Order, or rather the columns of the *hexastyle* (*six*-columned) portico of the Church in Regent Square, Gray's Inn Road, erected by Mr. Inwood, soon after the completion of St. Pancras' Church, whose portico so admirably exemplifies the florid and elaborately wrought Ionic of the Temple of Erechtheus at Athens. The columns of the Regent Square Church,—and it is on account of the columns *alone* that we allude to it, the structure being otherwise quite unworthy of notice, — differ from all other known examples; not only in their bases and capitals, but also in the very peculiar mode of fluting, or rather *striating*, employed for their shafts. Not having detailed drawings, or any drawings at all to assist us, we cannot pretend to enter into description, but can only say that base, shaft, and capital are unlike all received examples, and at the same time so well adapted to each other as to produce artistic unity and consistency of character; and that character is stamped by *breadth* and simplicity. With respect to the fluting, it partakes of what may be called *striating*, the fillets showing themselves rather as narrow surfaces raised upon the shaft, than the channels as positive hollows between them. The capital is at once graceful and simple, and derives much of its peculiar character from the enlarged eye of the volute, which is occupied by a rosette ornament.

Interesting as it would be to particularize other examples, we cannot do so here, which is the less to be regretted because mere verbal remarks, unaccompanied by drawings on such a scale as to fully show all their minutiæ, would not be very satisfactory. Perhaps we shall be thought to have already dwelt rather too long on the mere column, for we have not

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yet quite done with that part of the Order. It remains, however, to be observed, that notwithstanding its situation is such as to render detail there hardly noticeable, the baluster side of the capital was always enriched. In Greek examples it had a series of wide channels with broad fillets between them, and where great richness was affected, as in the Ionic of the Temple of Erechtheus, the fillets had an additional moulding upon them, carved into beads. In the Asiatic examples, on the contrary, and Roman ones also, the baluster side is usually cut into the form of leaves, bound together, as it were, in the centre by a broad moulded ring, which produces an exceedingly good effect; and indeed, in several instances, much better taste is manifested in that obscure part of the capital than in the face itself.

Although it is repetition to say that the base usually given to this Order by the Greeks was the *Attic* one, consisting of two *tori*, divided by a *scotia*, we here refer to that part of the column again for the purpose of noting a species of enrichment applied to it, the upper torus being sometimes fluted horizontally, at others cut to resemble an interlaced chain-like ornament, now called a *guilloche*. Modern Architects, however, invariably leave the upper torus of the base quite plain, even when they scrupulously copy every other part of the column. The only instance of channeling upon the upper torus, to which we can point, is that of the portico of St. Pancras' Church, which building well deserves to be carefully examined and studied by those who would acquire a correct idea of the exquisite finish and richness of Grecian Ionic details, and their effect in execution. But, unfortunately, like the one in Regent Square, that building too is not at all felicitous as a general composition.

For Ionic Antæ a few words will suffice. Without exactly agreeing with that of the column, the base does not differ very materially from it, except, indeed, in the Ilissus example, where it is lower than the other, and consists only of a shallow scotia with a channeled torus above it. In the Erechtheum

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example it is distinguished from the column base chiefly by both lower and upper torus being channeled. The capital, or, as it is more commonly termed, *anta-cap*, on the contrary, is differently shaped from that of the column, in consequence of having no volutes; wherefore it is not by any means so wide, neither is it so deep. The mouldings, too, though of the same character, are differently disposed. Still the anta-cap corresponds with the capital as to plainness or enrichment,—its mouldings being either carved or not, as those of the latter happen to be; and if the capital has an ornamented necking, so also has the anta-cap. One singularity in the treatment of Ionic antæ, is that the face of the anta has in some cases a slight break down the middle of it, which causes it to appear composed of two very narrow faces put together side by side, but not exactly *flush* with each other. This kind of antæ, in imitation of those of the Erechtheum—perhaps the only precedent for it—has been adopted for St. Pancras' Church. What could have led to it is rather difficult to conjecture, since there does not appear to be any adequate motive for it, or any purpose gained by it.

Ionic Entablature.—As expressed in the terms of the diameter of the column, that is, measured by it, the entablature exceeds that of the Doric Order. In the Parthenon the entire height of the entablature is not more than 2 diameters; while in the Ionic it is 2 diameters and 17 parts, or the third of a diameter more; whereas it would seem that the Ionic column being much slenderer, the entablature ought to be less in height than the Doric one, instead of being more. And so it is, and less in a considerable degree, since it is the height, not the diameter, of the column which regulates the height of the entablature; in other words, the height of the latter must be in proportion to that of the former.* Now $2\frac{1}{3}$ diameters

* The necessity for agreement in this respect between the column and its entablature will be rendered apparent by the preposterous effect produced in two instances where the columns have been prolonged to an absurd height without the entablature being deepened in the same degree:

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for the entablature is much less in proportion to a column 8 or 9 diameters high, than 2 diameters for the entablature is to one that is only 6 diameters high. In the latter case the entablature is equal to one-third of the column, and one-fourth of the whole Order; but in the other, $2\frac{1}{3}$ diameters amount to only a fourth, or thereabouts, of the height of the column, and consequently to only about a fifth of the entire Order.

The Ionic *architrave* does not differ materially from that of the Doric. Its average or standard height is the upper diameter of the column. In the plainer examples of Ionic, such as the Ilissus one, the face of the architrave is quite plain, as in the preceding Order, and distinguished from it only by the Doric tænia being converted into a moulding of a plain bead and small echinus, surmounted by a narrow tænia or broad fillet. In more decorated examples, as that of the Erechtheum, the face of the architrave is divided into three surfaces or courses, called *faciæ*, which very slightly project before or overhang each other, and the moulding between the architrave and frieze is increased in depth; there is a greater number of mouldings, and some of them are enriched by being carved, or, as it is termed, *cut*.

As to the Ionic frieze, triglyphs being discarded for it, and no other characteristic members substituted for them, it becomes no more than a plane surface interposed between the architrave and cornice, unless—as is now never done, although it was, in all probability, generally done by the Ancients—it is enriched with figures in bas-relief or other sculpture. Yet as *mere* sculpture of that kind, however essential to effect, is not taken into account, or considered to belong even to the character of an Order, but to be something quite extraneous that may either be introduced or omitted at

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namely, the portico of the Admiralty, and that within the court of Furnival's Inn; the first of which is bad enough, the other far worse in every respect.

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pleasure, it is omitted accordingly; whereby the frieze is reduced to a mere blank surface, which leaves nothing more to be said concerning it.

The Ionic cornice affords but little scope for further observation, more particularly in the Athenian examples, in which it consists of little more than the *corona* and cymatium above it, and some narrow *bed-mouldings* beneath the former member, partly got out of its hollowed soffit or under-surface. Consequently the whole cornice looks rather meagre and poor, especially if the richer form of capital with a necking to it be employed for the columns. In such case there is no corresponding degree of richness and increased importance in what is, nevertheless, the completing member or division of the entire Order, and ought accordingly to be treated as such. On this account we hold the cornice of the Erechtheum example to be very unsatisfactory, and to derogate from what is the character of the Order in all other respects: while the capital is particularly ornate, luxuriant, and complicated in design, the cornice, which, as has been before remarked, is to be considered as the capital of the entire Order, is particularly simple and severe; and owing to the want of a sufficiency of bed-mouldings beneath it, the corona appears to jut out too abruptly immediately over the frieze, without due preparation for it. Were the frieze sculptured, such enrichment would, perhaps, without anything further, confer an adequate degree of ornateness upon the whole entablature, and bring it into keeping with the highly finished columns. If, on the contrary, the frieze is to be left plain, the best way would be to reduce its height a little, and perhaps that of the architrave also, and enlarge the cornice by introducing *dentels* into it. These last-mentioned members—which, although considered by modern writers to be characteristic of the Ionic Order, and to be to its cornice what *mutules* are to the Doric, and *modillions* to the Corinthian, do not appear to have been so regarded by the Greeks themselves—consist of a series of narrow upright blocks (supposed to represent the ends of joists), placed closely together, so that

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the spaces between them, which are only about half as wide as the blocks themselves, appear to *indent* that portion of the cornice, which, when introduced without being so ornamented, is called an uncut *dentel band*.

The Priene example, to which we referred when speaking of Ionic bases, offers what, in our opinion at least, is a far better model for an Ionic cornice than that of the Erechtheum, and which, with perhaps some modification of it, might very well be applied to the more florid Athenian Order; and though to do so would be contrary to *precedent*, that would matter little, so that the change itself were in conformity with artistic effect and æsthetic principles.

The Temple of Jupiter at Aizani in Asia Minor exhibits a remarkable example of the Ionic Order, the details of which were recently published, for the first time, by M. Texier. In its general conformation the base resembles the Priene example, but the entablature is quite different. The architrave is divided into three faciæ, separated by a cut moulding; and the upper facia is surmounted by an exceedingly deep and highly enriched course of mouldings. The frieze, too, is ornamented in a very unusual fashion, acanthus leaves being placed upon it at intervals, somewhat after the manner of triglyphs, and connected together with scrolls. The cornice has both dentels and modillions, and a narrow corona, but a deep cymatium or epitithedas, enriched with carving.

We will not pursue our notice of the Greek or Ancient Ionic any further, but here conclude with observing that notwithstanding its decided superiority to the Roman, &c., more especially in its capital, it has not been adopted by the Italian and French Architects of the present day. In this country, on the contrary, the Greek Ionic has been employed almost to the entire exclusion of the other, from the time of its being first made known to us by means of Stuart and Revett's 'Antiquities of Athens,' and the 'Ionian Antiquities;' to which publication may be added the 'Unedited Antiquities of Attica,' which contains other specimens of the

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Order, found at Eleusis, remarkable for their refined simplicity and also their gracefulness. Not the least important lesson to be derived from these and similar publications is, we permit ourselves to say, the learning from them that the Greeks treated their Orders with artistic spirit and freedom, conforming to a certain type or general standard for each, but varying their details and modifying their proportions.

For examples of Grecian Doric and Ionic which may be seen in London, and which the student would therefore do well to look at and carefully examine for himself, since he will from these learn more than he possibly can do from books alone, we refer to the following buildings; for Doric, the *tetrastyle* portico of Covent Garden Theatre, and the *hexastyle* one of the Colosseum in the Regent's Park; which latter shows the Order to much greater advantage than the other, owing to its being free from such disturbing and very un-antique additions as doors and windows within it, which inevitably destroy all breadth and repose;—it has also the advantage of a west aspect, by which the full effect of light and shade is produced. For Ionic examples, we refer to St. Pancras' Church, New Road, whose order is a faithful transcript from that of the Erechtheum; the same building also affords an instance of the application of a caryatid order of female figures in the porch, or rather the porch-like structure, on its north and south sides,—the idea of which is taken from a similar small structure attached to the Athenian Temple;—the University Club House, Pall Mall East, where the same Order is applied upon a much smaller scale, and raised upon a basement floor;—the Chapel in South Audley Street;—the portico of the Post Office, and the façade of the British Museum;—the portico of the College of Surgeons, Lincoln's Inn Fields, whose columns, proportioned according to the Ilissus example, were originally plain, but were fluted, and the mouldings of the entablature cut, when the building was altered and greatly improved some years ago, by Mr. Barry;—the portico of Hanover Chapel Regent Street, which, as the

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reader is already aware, shows the Priene Ionic;—and lastly, for we will not further extend this list, the portico of the India House, Leadenhall Street, which is remarkable for its frieze being sculptured, and its pediment also filled in with figures in relief. Of similar decoration for the Doric Order we cannot point out any instance here, both the metopes of the frieze, and the pediment, being left plain in all our English specimens of that Order, and in every one of our so much vaunted examples 'after the Parthenon,' produced during the Greek mania and mannerism.

ROMAN AND MODERN IONIC.

To elucidate this part of our subject at all satisfactorily would require a great number of drawings; accordingly we must make shift as well as we can without them, leaving the student to turn to other works for examples,—should he, as we trust he will, have imbibed from our remarks any relish for the study of the Orders by accurate comparison of various examples of one and the same Order. Neither the Romans nor their modern successors appear to have comprehended the genius of the Ionic Order any more than of the Doric. Their best imitations, both of the one and the other, were of but a bungling kind. They certainly had no great affection for either, for we find comparatively very few instances of them in Roman remains. As treated by them, the Ionic capital was not only greatly impoverished, but deformed also,—impoverished by the volutes being greatly reduced in size, and consequently in importance also, as characteristic marks of the Order,—and deformed, owing to the tasteless treatment of it in other respects. Instead of the gracefully flowing *festoon* hem, or mouldings over the echinus, which seems to connect the two volutes or sides of the face of the capital together, there is a straight line without any moulding to it, and the echinus, projecting before it, produces an appearance of clumsiness—of the several members not being properly adjusted to

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each other. As in all the Greek examples, the echinus of the capital, which passes behind the volutes, is invariably carved with that sort of pattern which workmen call 'eggs and darts,' *ova* or egg-shaped ornaments, almost naturally resulting from the contour of the moulding before it is cut; and the echinus of the Ionic, being always so carved, is on that account distinguished by the name of *ovolo*,—not because its section or profile is any portion of an oval or elliptic curve; for among other things the Roman style differs from the Greek in having all its mouldings, both convex and concave, formed of portions of circles, by which its details become less elegant in contour. Such minutiæ as mere mouldings are, however, matters of quite secondary consideration in comparison with composition and general effect. Though we cannot enter into such niceties in a mere rudimentary work, they certainly ought to be duly attended to; yet to do so 'duly' is very different from doing so exclusively, and, as it would seem, without taking any account of, or else in utter ignorance of, greatly more important artistic requisites. There has been too much of plodding microscopical criticism with regard to mouldings and other details, looked at and exhibited individually and fragmentarily—which is almost as much as to say, prosaically also. The botanist examines his specimens through a lens, one by one, but the eye of the artist grasps and comprehends a landscape at a glance.

Even in the best Roman and modern examples, the volutes are decidedly inferior to Greek, being comparatively tame and meagre, yet coarse also. Italian Architects have sometimes made them so small and insignificant that they give scarcely any character to the capital, or render it distinguishable, at a little distance, from the Doric, its general mass being no greater. The spiral makes fewer revolutions, and the *hem* or moulding which forms it is flat, as is also the interspiral or general surface of the volute, which has never any secondary spirals upon it, though that and the *intervolute* are sometimes enriched with foliage.

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Of the Roman Ionic Order, as a whole, we know very little, there being only three accredited examples of it, viz. the Theatre of Marcellus, the Temple of Fortuna Virilis, and the Temple of Concord. Of the first of these, the capital is the simplest and plainest, and also the smallest in its proportions; that of the second is by very far the best, its volutes retaining most of the Greek character; and that of the third is remarkable, if not for its ugliness in other respects, for its volutes being turned outwards diagonally, so as to present four equal faces,—a mode afterwards *re-invented* and brought up as a novelty by Scamozzi, in honour of whom it has since been distinguished by the name of the Scamozzi capital. But if there are few ancient buildings remaining of the Roman Ionic Order, there are numerous detached specimens of it in antique columns that have been preserved by having been made use of in other buildings, or deposited in collections of sculpture. Many of these have been delineated and published by Piranesi and others; and they are so numerous and so varied that we cannot pretend either to classify them, or to particularize even the principal ones. All that we can here say is, that although they fall far short of the refined taste exhibited in Greek examples, some of them possess considerable merit, and supply ideas for other and better varieties. They also serve to convince us that, like the Greeks, the Romans did not abide by a single stereotype pattern for each Order: the attempt to establish such uniformity and conformity to rule was reserved for the Palladios and Vignolas of the 16th century, who established the orthodoxy of routine, and carefully trained-up dulness.

There is a fine antique example of the kind in the British Museum, in which the volutes are placed diagonally, and beneath each face of the capital there is not a mere flat mask, but a head, cut out in bold relief, all of them different from each other. The whole is excellently well composed, and highly interesting as a study. One of the varieties of Ionic capitals shown by Piranesi is that from a column in the Church of

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Santa Maria Transtevere at Rome, which is ornamented on its face with a small head or bust upon the face of the intervolute and abacus, and the eye of the volutes themselves is unusually large, and contains a small half-length female figure carved upon it,—which, though it can be distinctly seen in a drawing, can be hardly perceptible in the column itself. The only other variety of or *invention* for the Ionic capital that we can notice is one that has frequently been practised by Italian Architects, and which may be distinguished as the *festoon* or festooned capital, the volutes being turned diagonally, and a festoon being suspended from the eye of one volute to that of the other beneath each face. This not only gives variety and richness to the capital, but by increasing its volume or bulk increases its importance also, and produces great play of light and shade: there is harmony together with diversity in the combination of forms, the curve of the festoon being, though dissimilar, in agreement with the outline of the volutes. The columns of the circular portico to the Church in Langham Place have capitals of this description, in which cherub heads are introduced into the festoons; and so far as the mere capitals go, that specimen of Ionic is entitled to much praise: the misfortune is, that the Order is not satisfactory as a whole; for the increased richness of the capitals requires that there should be a corresponding degree of richness given to the entablature. At present there is no proportion—that is, with regard to decoration—observed; for the same entablature, or cornice at least, which is in keeping with a smaller and plainer capital, cannot be equally adapted to a larger and more ornate one, but partakes either of excess, or the 'too much' in the one case, or of deficiency, or the 'too little' in the other,—not perhaps as to size, but in regard to the *quantum* of embellishment. To obviate the meagreness and insignificance of the usual Italian Ionic capital, Sansovino and some others have frequently given it a necking, either plain or enriched, which, even when plain, greatly improves the general appearance of the column by increasing the depth of the

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capital and reducing the height of the shaft. To make this the clearer, let us, without pretending at all to exactness, call the column nine diameters high, and the capital either half a diameter, or a whole one, accordingly as it is without or with a necking: now in the first case the capital will be to the shaft (base included) only as one to *seventeen*, whereas in the other it becomes as one to *right;* which is not at all too much: while the other way the shaft is much too lanky, and the capital too low,—as is probably felt by those who cannot explain the cause of such disagreement and disproportion.

ENTABLATURE.—There is not much to say, at least there is no occasion for saying much, relative to this part of the Roman and Modern Ionic Order.. The ancient examples of it are by far too few to admit of any general laws for it being derived from them; nor are the examples themselves very satisfactory. That of the Ionic of the Theatre of Marcellus is, perhaps, the best upon the whole, and seems to have been that which has guided the Moderns in the composition of their entablature, although they have very greatly diminished the proportions of the cornice, which is there nearly equal to both architrave and frieze together. In the Athenian Ionic we may set down the architrave, frieze, and cornice as about 50, 50, and 35 minutes respectively, making altogether two diameters and 15 minutes (or a quarter of a diameter); therefore the cornice is to each of the other two divisions of the entablature only as 35 to 50. In the Roman Ionic, on the contrary, the cornice is by much the largest division: in the Fortuna Virilis example the measures are,—architrave 38′, frieze 19′, cornice 70′; in that of the Theatre of Marcellus, 43′—36′—66′, making the entire entablature 127′, or 2 diameters 7′.. Although modern Architects vary from these proportions, and some of them make the frieze equal to or more than the architrave, they all agree—in doctrine at least, if not in practice—in making the cornice the largest division of the entablature; and as the projection is usually equal to its height, or thereabouts, the cornice thus gains

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in importance both ways, and, as far as its mere proportions are concerned, becomes an adequate finishing to the entire Order. This latter mode certainly appears more in accordance with artistic principle: shall we then presume to say that the Greeks were wrong in their treatment of the Ionic cornice?—Well, let us say then, that they were not quite so right as they might have been. To us, the Asiatic Ionic cornice (for instance that of the Priene Order) is far more satisfactory than either the Hellenic or Athenian; and in our opinion it would require a cornice richer still, to correspond with the highly elaborated Erechtheum capital, and maintain due artistic keeping in the whole of that Order. These remarks partake, perhaps, too much of digression: we will therefore dismiss them, and the cornice also, merely adding that either dentels, or larger plain blocks, placed rather wide apart from each other, are considered the proper characteristic marks of the Ionic cornice.

There is nothing in either the architrave or the frieze that calls for observation, except that the Moderns have frequently given to this Order, by way of distinction, a convex frieze, technically termed a *pulvinated* one from its fancied resemblance to a cushion (*pulvinar*), whose sides swell out by compression when sat upon. A frieze of the kind occurs in what is otherwise a very corrupt specimen of the Order, in the Baths of Diocletian. It would be absurd to suppose that such form of frieze originated in an imitation of the thing after which it is now named; and there are two motives, either of which, or both combined, may have led to it. The first of them is, that such curvature in the face of the frieze may have been thought very suitable for the Ionic Order, as agreeing with the curved forms predominating in the character of the capital, namely, the volutes. The second is, that a convex surface produces greater diversity of light and shade than a plain one; and coming between the architrave and cornice, is sufficiently distinguished by contour alone. Still it must be admitted that such form is somewhat too arbitrary and fanciful to be

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in accordance with strict architectural principles. It is well enough suited for interiors, or for entablatures upon a small scale, such as those of doors and windows, but not for a large external Order. The pulvinated frieze occurs frequently in the Cinque-cento and Renaissance styles, and in our own English Renaissance, or Elizabethan. An instance of it may be seen in that well-known and celebrated piece of architecture by Jones, the front of Whitehall Chapel, whose Ionic Order generally will convey an idea of the Italian mode of treating it. And it so happens that the tasteful little screen front of Dover House (added by Holland to the original mansion), on the opposite side of the street, offers an example of the Ilissus Ionic, whereby immediate comparison between the two styles may easily be made. Another specimen of Italian Ionic, and of Italian Doric, is the new portion lately added to the Carlton Club House, Pall Mall, which is all but a literal copy from Sansovino's Library of St. Mark at Venice. Sansovino seems there to have aimed at the greatest possible richness for both Orders; and in his building the Doric metopes are sculptured, but are left plain in the Club House, although such decoration for them would have been novelty here, and would have brought that lower Order more into keeping with the upper one. The shafts of the columns are not fluted as in the Italian building, but for very sufficient reason: being of dark polished granite, they would have acquired no greater richness in consequence of their being so cut; on the contrary, the effect of the material itself would have been impaired. The Ionic capitals have an ornamented necking, which is here not only a beauty but a great propriety, because without it the capitals would have looked diminutive, more especially beneath such a greatly exaggerated entablature. Tested by ordinary rules, this last must be pronounced monstrous, licentious in the extreme, perhaps downright barbarous; and, no doubt, would be so, were it not protected by the name of Sansovino. His English copyist has therefore sufficient authority for it,—not so, Sansovino himself: whence, then, did he get his *prece-*

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dent? Well, he dispensed with precedent, and using the privilege of a master in his Art, ventured beyond its written rules and conventionalities,—ventured where he might have failed, and exposed himself to derision,—but succeeded, and has been crowned by applause. In Art, as in other things, success sanctifies enterprise: if you fail, the world calls you a madman or fool; if you succeed, it bows down to you as a genius. It must be confessed that such an entablature as Sansovino has there given his Ionic Order would be nothing less than monstrous, did the Order itself constitute the edifice, as in the antique temple; instead of which, the two Orders there introduced are no more than ornamental accessories, and the greatly enlarged entablature of the upper one is to be regarded as proportioned with reference not so much to its own columns as to the general mass of the entire façade. It may be as well to remark here, that both the Carlton Club House and Whitehall Chapel are instances of *super-columniation*, or two Orders placed one over the other—in the former building, an Ionic over a Doric—in the latter, a Corinthian over an Ionic Order. And in both cases the columns are *attached* or *engaged*, as is said of columns which are united to the face of a wall so as not to project from it as much as their diameter, but only about half or three-quarters of it, and they are therefore termed respectively *half* or *three-quarter* columns.

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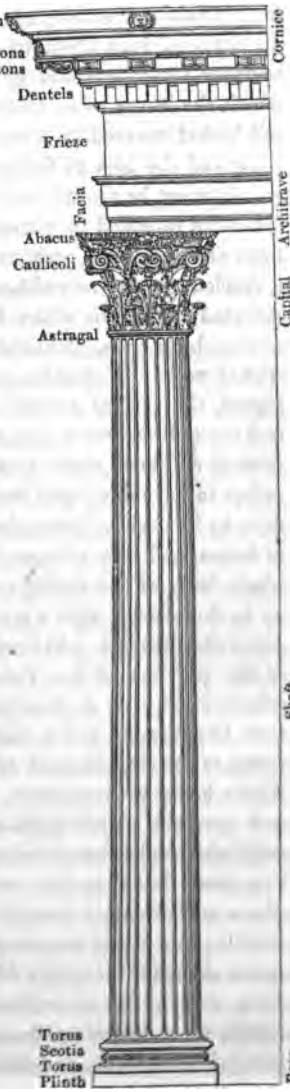
CORINTHIAN ORDER.

We now arrive at the third and last of the Orders, or that which is distinguished from the other two, more by its deep and foliaged capital than by its proportions,—at least it is chiefly so distinguished from the Ionic, with which it has in other respects many points in common; for the columns of both have bases differing but little from each other, and their shafts are fluted in the same manner. How this Order came to obtain the name of Corinthian is not very clear; nor is it, architecturally, of any moment whether such name be right or wrong. All that is certain is, that examples of this Order have not been found at Corinth itself, where, judging from its name, it would seem to have been the prevalent style of building, and there brought to perfection. There is a pretty legend relative to the origin of the Corinthian capital, which, if not true, has at least probability in its favour, and is many degrees less nonsensical than the supposed origin of the Ionic one. Nay, it is even valuable and instructive, as showing how well a skilful artist can derive hints



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from trivial or accidental circumstances, and by improving upon them, turn them to account. As the story goes, the sculptor Callicrates was so struck by the graceful forms into which the leaves of an acanthus-plant had grown up around a tall basket covered by a square slab, that he sketched it, and conceived the idea of fashioning the capital of a column after it. It must be owned that the anecdote seems itself to be an invention intended to account poetically for the origin of such form of capital, and perhaps on no better grounds than that of a fancied general resemblance,—just as some dreamers have detected the origin of the Gothic style in an avenue of lofty over-arching trees, or in the interlacing stems of a framing of wicker-work. Unluckily for the credit of so respectable a legend, the earliest examples exhibit, instead of the strongest and most direct resemblance to the presumed prototype, the faintest and most vague of all. The Corinthian capital seems rather to have developed itself gradually out of the Doric one; first, by its necking being deepened and ornamented with a row of leaves, and then afterwards the echinus suppressed, and the whole body of the capital made to expand in a concave curve up to the abacus, with a second row of plain and flatter leaves above the first one. At least the capitals to the small columns of the porches of the Tower of the Winds at Athens, and others discovered at Miletus and elsewhere, seem to favour such hypothesis; and in further evidence of such Doric derivation is the circumstance of the columns of the Tower of the Winds being without bases. It will be argued, perhaps, that such examples do not at all answer to the character afterwards established and adhered to for capitals belonging to that Order. Very true: but then they may surely be received as incipient efforts and attempts towards the formation of a third class of capitals; and in the instances just referred to, the overhanging square abacus without any foliage or curling tendrils spreading out to support its extremities, points, in our opinion, clearly enough to a derivation from the Doric capital, considerably enlarged downwards, and also greatly enriched. However, we

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leave others either to adopt or reject this notion, just as they may be disposed. At the best, all such questions are little better than matters of idle curiosity, and must always remain questions after all.

To quit conjecture for fact, the fact is the Corinthian Order does not appear to have been ever matured into a distinct style and complete system by the Greeks. There is, indeed, one solitary Athenian example of Corinthian, which exhibits the utmost refinement of exquisite richness attempered by exquisite delicacy. In the Lysicrates capital,—as we will for convenience call it (the example alluded to being that of the monument of Lysicrates, otherwise called the Lantern of Demosthenes, at Athens),—foliation may be said to have attained its culminating point: rivalled it may be, but hardly surpassed. Still it must be confessed, as a whole, that Order leaves much to be desired for it, there being nothing of corresponding beauty and luxuriance in the rest of it. The cornice, for instance, is only a simple dentelled Ionic one, nor are any of the mouldings of the entablature cut. There was, however, in that particular case, above the entablature, what fully counterbalances and carries out the idea and expression of the capitals, namely, the ornamental roofing, and the matchless finial which crowns the structure, and produces a full climax of beauty and of grace. Charming as the original itself is, or, more correctly speaking, *was*, it has perhaps been more blunderingly copied and imitated than almost any other antique structure. Although the whole—its lofty-proportioned basement included—is not above 36 feet high, a copy of it, or what calls itself such, has sometimes been hoisted up on the top of a lofty tower, or raised on a modern church or chapel to serve as its belfry; or else the columns and entablature have been taken just verbatim, and applied, by way of change, as an Order, upon a scale for which the capitals, at least, were never intended. The Strand front or entrance of Exeter Hall consists of a loggia with two lofty columns of the kind, whose capitals, being placed at such a height, show as no better than heavy

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sculptured masses whose details it is impossible, or at least requires great patience, to make out. More preposterously still, the Girard College at Philadelphia plumes itself upon exhibiting an exact copy of this Order, where the columns are magnified to the height of between fifty and sixty feet, so that all that can be made out of the capital is, that it is exceedingly rich,—by very far too much so for any other part or feature in the building;—and that is called being classical!

Let us now consider the Corinthian Order in its general and prominent characteristics, belonging to all varieties of it alike. Although the Order itself is the most delicate and lightest of the three, the capital is the largest, being considerably more than a diameter in height,—upon the average, about a diameter and a quarter. This, however, will cause the reader no surprise, if he bears in mind what has been before said as to the proportion to be observed between the column and its capital. The taller the former is, the taller must be the latter also, and so far bulkier; although, while actually increasing its bulk, its tallness corrects the appearance of heaviness by giving the *proportion* of slenderness. A capital whose height is only half a diameter is, of course, by no means positively so bulky as one which is upwards of an entire diameter in height, but then it is much bulkier or broader in its proportions, being about twice as broad as it is high,—whereas the other is much higher than it is wide. This explanation makes, we hope, the matter sufficiently clear, and that after it the reader will not feel himself at all puzzled about it.

The capital has two rows of leaves, eight in each row, so disposed that of the taller ones composing the upper row, one comes in the middle, beneath each face of the abacus, and the lower leaves *alternate* with the upper ones, coming between the stems of the latter; so that in the first or lower tier of leaves there is in the middle of each face a space between two leaves occupied by the stem of the central leaf above them. Over these two rows is a third series of four leaves, turned so

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as to support the small volutes which, in turn, support the angles of the abacus. Besides these outer volutes, which are invariably turned diagonally, as in the four-faced Ionic capital, there are two other smaller ones, termed *caulicoli*, which meet each other beneath a flower on the face of the abacus. The abacus itself is differently shaped from what it is in either of the other two Orders. In the Doric it is, as we have seen, merely a thick square slab, fitting the echinus beneath it, and left perfectly plain. In the Ionic it is square, but its sides are moulded, whether they are carved or not. The Corinthian abacus, on the contrary, is not, properly speaking, a square, although it may be said to be so in its general form, inasmuch as it possesses *squareness*, having four equal sides. But instead of being straight, the sides of the abacus are concave in plan, being curved outwards so as to produce a sharp point at each corner, which is usually cut off. Thus we find that the abacus here assumes a very different shape from its original one; yet merely to know this is to know very little. Such form of it is of course a distinction, but it was not for the sake of distinction that it was adopted. It grew out of intention and purpose: it was dictated by necessity—by artistic necessity at least, which requires that the abacus should be adjusted to and conform to the upper part of the capital, so that they fit each other. Now a square abacus would not at all suit a capital whose foliage spreads out so widely at its angles. We have spoken of the capitals of the Tower of the Winds, as, according to our opinion, showing the earliest formation of what we now call the Corinthian capital. In that example the abacus is square, and the upper row of leaves of the kind called *water-leaves*, from their resemblance to those of water-plants, being broad and flat, and merely carved upon the *vase* or body of the capital. The next stage of progress or transition was to add larger curling leaves and volutes to support the angles of the abacus; but then if the abacus remained square as before, it would either overhang the capital too much in the centre of each face of it, or would not cover

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the enlarged sweep of the leaves and volutes at the angles. Consequently, it was necessary to effect both extension and reduction for the abacus,—extension at its angles, and reduction as regards its general bulk, which beforehand apparently very difficult, if not impossible feat, was accomplished in the simplest manner possible, by merely curving the sides of the abacus. Thus not only is the abacus expressly shaped in conformity with the great projection of the leaves, &c. at the four angles of the capital,* but a beautiful contrast, contributing to general harmony, ensues in consequence,—the concave sides of the abacus corresponding antithetically—in other words, contrasting with the general convexity of the capital.

The general structure and configuration of the Corinthian capital are now described, and, it is to be hoped, understood also. It may be as well, however, just to recapitulate: the body of the capital is surrounded by two rows of leaves, eight in each row; besides which there are four leaves which, with the volutes over them, serve to support the four angles of the abacus, which is fashioned as we have just been explaining. Simple and limited as these elementary and *constitutional* forms may be thought to be,—insufficient for any great variety or range of character, the Corinthian capital admits of almost infinite modification. Putting entirely aside all details and their minutiæ, the capital of this Order is susceptible of very great diversity of character in regard to its general proportions alone, as may be seen by a comparison of a few—and they but a *very few*—examples given in a note below.†

* For similar reason, the same concavity in the sides of the abacus takes place in the four-faced Ionic capital, the abacus being so shaped in order that it may subtend over and cover the diagonally turned volutes.

† We place these examples according to their respective proportional heights, beginning with the highest, and descending to the lowest, and note their measurements in *minutes* rather than in diameters and fractional parts, as being the most direct and convenient mode of comparison. The

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Almost every antique example is marked by something peculiar to itself; wherefore, properly to analyze them and compare them all, would require not only some scores, but some hundreds of drawings, and hundreds might be multiplied into thousands, were we to collect together all the varieties of the descendants of the Corinthian or foliaged-capital column that are to be found in buildings of the so-called Byzantine style, when the original idea of an Order had been entirely lost sight of. In fact, all the compositions that have been produced with the intention of producing a *new*, and what as such ought to be a perfectly distinct Order, congruent in all its parts, have consisted of little more than variations of the Corinthian capital; as if difference in the details of the capital sufficed to constitute a different and quite distinct Order. Properly understood, *Order* is, if not exactly so, little more than another word for style; and a new style is not to be invented or established, like the alteration from old to new style of the almanac by Act of Parliament. Style must of necessity grow up gradually: the ideas of many minds must contribute to its formation.

From the examples whose proportions are stated in the preceding note, it will be seen that the height of the capital varies from 60′, or just a diameter, to 87′, or nearly half as much again; although it must be allowed that the latter is a very unusual degree of height, nor does that example (the Lysicrates one) belong, like the others, to the Roman Corinthian class. Reserving our remarks on one or two particular

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height of the capital is taken exclusive of the astragal which divides it from the shaft of the column; and as the *expansion* of the capital upwards has also to be considered, the extreme width of the abacus is also indicated.

	Height of capital.	Diameter of abacus.
Lysicrates example	87′	94′
Nerva do. (columns of the Forum of Nerva)	73′	90′
Pantheon at Rome	69′	90′
Jupiter Stator, Temple of, ...	66′	97′
Tivoli, Temple of the Sibyls, . .	60′	81′

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specimens of the latter till after we have spoken generally of the other parts of the Order, we continue by saying that the proper Corinthian base differs from that of the usual Ionic or Attic in having two smaller scotiæ, separated by two astragals: however, both kinds are employed indiscriminately, and the Attic base is that which is generally used, except a greater degree of delicacy and richness than ordinary be required. As the shaft is fluted similarly to that of the Ionic column, viz. with twenty-four channels, there is nothing for notice or remark there, unless it be that the flutes are sometimes *cabled*, as it is called, that is, the channels are hollowed out for only about two-thirds of the upper part of the shaft, and the remainder cut so that each channel has the appearance of being partly filled up by a round staff or piece of rope, whence the term *cabling*. Though not approved by puritan critics,—who, nevertheless, wink at, or else are blind to much greater licenses,—this mode of fluting certainly gives an expression of greater strength to the lower part of the column, and, by contrast, that of greater delicacy to the upper one. Several other modes of fluting, or otherwise decorating the shafts of columns, were occasionally practised by the Romans, as may be seen from architectural specimens and fragments still extant, and which have been delineated by Piranesi and others. Some of them are so exceedingly elaborate in execution, as to be, if for that reason alone, quite unsuitable for practice unless on very peculiar and exceptional occasions. Still, artistic ideas are to be obtained from them. Modern Architects, however, even those who have been most ambitious of decoration—most extravagant and capricious in other respects, have been remarkably abstinent and sober with respect to their treatment of the shafts of their columns, they having left them for the most part quite plain, even where a more than ordinary degree of enrichment has been aimed at by them in other parts of the design. The shaft of a column is, indeed, complete without fluting, unless, perhaps, it be that of the Greek Doric, in which such striating of its surface appears almost essential to character,

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and requisite for counteracting what would else look like both heaviness and baldness. Consequently, Fluting is what admits of being either applied or omitted *at discretion;* in other words, accordingly as sound artistic feeling would dictate. Such feeling has in one instance been exhibited in an equally successful and peculiar manner, both fluted and unfluted columns being there (viz. the loggia at the north-west angle of the Bank of England) combined in the same composition; whereas had the inner ones been fluted like the others, not only would picturesque contrast have been forfeited, but a look of disagreeable confusedness would have taken place. Such kind of contrast is analogous to that of the fluted columns and plain antæ of the Greek Doric. In connection with this last observation, it may be here noted that the Corinthian mode of fluting is applicable to pilasters and other plane surfaces, as well as to the shafts of columns. It serves to impart richness, and what is understood by the term '*colour*,' to them. When antæ—as to deserve such term, they ought to do—occur only at extremities of walls, at right angles to the front, they of course show themselves sufficiently distinctly; but with pilasters slightly projected upon the face of a wall it is quite different, because in such case the face of the pilaster does not show itself decidedly unless the wall is 'rusticated,' or else the pilaster itself of a different colour and material; and hardly is it necessary to say that when the shafts of columns and pilasters are of variegated marble or otherwise distinguished by colour, fluting is quite out of the question, since instead of enhancing effect, it would then rather impair that of the material itself, whose intrinsic value and beauty render further embellishment superfluous, if not injurious also.

ENTABLATURE.—The architrave is generally divided into three faciæ, (the lower one much narrower than the others, which is rather contrary to architectonic principle, the weaker member being placed under heavier ones,) with mouldings between them, which, though frequently left plain, are properly enriched in the best and most consistently finished-up ex-

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amples. We pass over the frieze, that being merely a single surface, either plain or sculptured. The cornice is very much larger than in the other Orders,—larger as to height, and consequently as to projection also; which increased height and projection, and we may add, increased richness, are demanded by the greatly enlarged bulk of the capital and its more elaborate decoration. Examples vary so greatly that we can give only approximating mean and average proportions, which may be set down at about 2 diam. 12′ for the whole entablature, and 54′, or something less than a diameter, for the cornice; but it is in many instances more, in others as much less. As may be supposed from this greatly increased depth of the cornice, it consists of a greater number of mouldings beneath the corona, for that and the cymatium over it invariably retain their places as the crowning members of the whole series of mouldings. To the dentels of the Ionic cornice is added a row of *modillions*, immediately beneath and supporting the corona. These modillions are ornamental blocks, curved in their under-surface somewhat after the manner of the letter S turned thus ∽ ; and between them and the dentels, and also below the latter, are other mouldings, sometimes cut, at others left plain. Sometimes a plain uncut *dentel band* is substituted for dentels; sometimes, in simpler cornices, that is omitted altogether, and plainer blocks are employed instead of modillions; or else both dentels and modillions are omitted, as in the Temple of Antoninus and Faustina, notwithstanding that its cornice is considerably enriched, even the face of the corona being fluted.

Besides the several varieties of the Corinthian shown in entire compositions of the Order, or the columns and entablature together, there are numerous fragmentary examples existing, either in single columns or capitals alone, or in cornices and other parts of entablatures; some of which display such prodigality of decoration and such difference of character from the usual Corinthian, that they might very well pass for belonging to a distinct Order, if that variety which is classed

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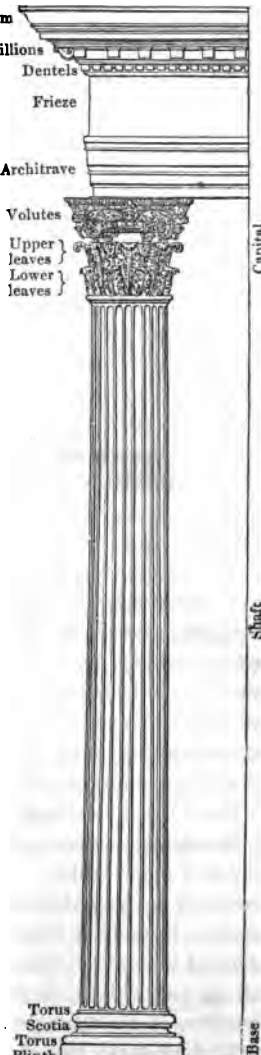
as a separate one, under the name of COMPOSITE, can with any propriety be reckoned such, merely because the volutes at the angles of the capital are expanded into the proportions of those in the Roman Ionic capital.

The very dissimilar varieties to be met with, all belonging to one and the same Order, show plainly enough that the Architects of antiquity considered themselves at liberty to design their own detail, and to treat an Order as a composition marked out for them in its leading forms and general proportions, but which they might fashion nearly *ad libitum* in other respects. Modern Architects adopt a contrary course, which, if not particularly artistic, or even rational, is certainly convenient; although in spite of all precaution to secure conformity and maintain architectural orthodoxy, grievous licentiousness will creep in. It is something to get what is only a faithful copy of an ancient example, but it is only very rarely we get even that. For instance, fluting is omitted for the columns where such decoration may be required, in order to make them correspond with the degree of richness given to the entablature; or else it is the latter with which wholesale liberty is



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taken,—mouldings which in the cornice of the original are more or less enriched, being left plain, or a bare frieze substituted for a sculptured one, and other little liberties of that kind, which are considered perfectly allowable, and to make hardly any real difference, although they in fact alter the character of the whole composition. Either the original is itself faulty, or it must suffer by *piecemeal* alteration. It will, perhaps, bear to be somewhat reduced in richness, or, *vice versâ*, to have a greater degree of decoration given it; but in whichever way such kind of alteration takes place, it should be conducted uniformly for the whole composition. No excellence of proportions can atone for *disproportion* in regard to consistency of embellishment, and for the general disharmony of the whole composition. Italian Architects not unfrequently either overload their compositions with ornament, or leave them quite bare, and make no scruple of putting a cornice of the most meagre description, without either dentels or modillions, to an Order whose capitals denote it to be intended for Ionic Corinthian.

It was, perhaps, fortunate both for Sir John Soane, and that example of the Corinthian which he employed for the Bank of England, that it was not an invention of his own, or it would, in all probability, have been ridiculed as a monstrosity; and he would have been thought to have there out-Soaned himself in whimsicality and capriciousness. As it happens to be, however, an express copy from the circular Temple at Tivoli, people are at liberty to admire it, more especially as the mere application of it for the first time in this country—the only one where it has been adopted—does not exalt Soane into the successful inventor of a 'new Order.' In the system of the Orders it may certainly be regarded as a newly-discovered planet, being so distinct from every other example of the foliaged-capital class; distinct not only in the capital itself, but in all its members, in all its proportions, in the style of all its details, and, consequently, in its character. The height of the column is only 9·25′ diameters; the capital, measured from above the astragal,

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only 1 diameter, and the entablature only 1·42′ diameter. These proportions give the whole Order a certain expression of masculine simplicity, more especially as the column is hardly diminished at all, the difference between the upper and lower diameter amounting to no more than 4′, or only $\frac{1}{15}$th of the larger diameter, that being of course 60′, and the other 56′. The base consists of two *tori*, but instead of the usual scotiæ between, there is merely a narrow plain fillet, and a second broader one, overhung by the upper torus. Besides which, another peculiarity is, that the lower torus is somewhat detached from the surface on which the column stands, by a very narrow but deep incision beneath it,—a mode of treatment quite different from the usual one of placing the base upon a square plinth, but which, different as it is, does not produce, as might be supposed, any appearance of weakness, the incision being no more than a mere line—a delicate artistic touch. The fluting (at least the mode in which the flutes are terminated) is not a little remarkable; for below, they and the fillets are continued to and die into the upper edge of the base; while above, they are terminated horizontally instead of by a semicircular curve, as in all other examples of both Ionic and Corinthian fluting. The capital is so exceedingly peculiar in conformation and detail as to defy verbal description. The leaves have nothing in common with those of the usual acanthus; the volutes are of peculiar shape, and the flower which ornaments the abacus is as singularly large, and descends to the top of the upper leaf: boldness and breadth of parts characterize the whole composition, and also that of the entablature. As all its mouldings are uncut, this last would be much too plain to be in keeping with the column, were not the frieze sculptured with rich and 'bossy' festoons in the same energetic style as the capitals. Such ornamentation of the frieze is absolutely part and parcel of the Order; and the value of it will be best understood by comparing those parts of the Bank, in which it is retained, with others in which it is omitted. The same Order, with the frieze enriched, has also been since em-

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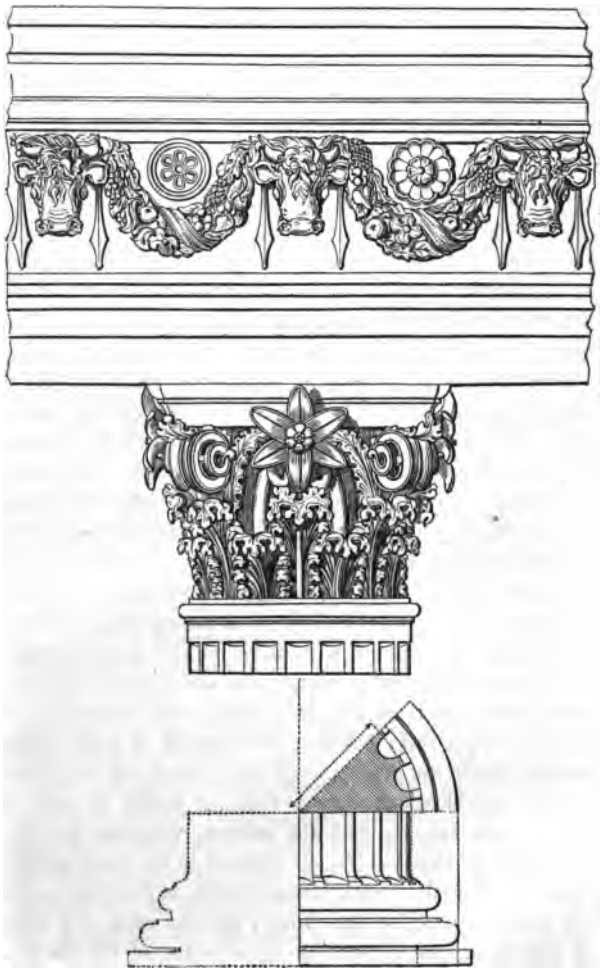
ployed in the front of St. Paul's School, St. Paul's Church-



yard; but there, owing to windows and other disturbing cir-

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cumstances, its effect is greatly impaired, as is the case even in the centre of the south front of the Bank itself, where it differs widely from that of the beautiful loggia at the north-west angle of that edifice, and compared with which it manifests in the part first mentioned a sad falling off, becoming no better than a dull, spiritless, prosaic version of its real self. In a word, it is out of its element.

The next, and it must be the last example which can here be noticed, is that of the so-called 'Jupiter Stator,' which may be said to exhibit *Corinthianism* in its fullest luxuriance. Great as is the dissimilarity between this and the preceding example of the Order, they are alike in one respect, each being perfect in its way, complete, and harmonious in all its parts; and we ought to be thankful that two such opposite specimens of one and the same—namely, the foliaged-capital style—have been preserved to us for our admiration, and for our instruction also, as if on purpose to convince us what opposite kinds of beauty may be arrived at where, though the general configuration of the Order is adhered to, a different spirit and character are infused into it. Of the example now referred to, the character is elaborate richness subdued by refined taste. Though of lower proportions than usual, the capital is singularly ornate, and a corresponding degree of ornateness is diffused over the entire Order. The second or middle facia of the architrave, and all the members of the cornice, except the dentels and the cymatium over the corona, are sculptured, and the whole is consistently finished up in every part. The first application among us of this superb example of the Corinthian was in Holland's beautiful portico to Carlton House, where, instead of being moderated, its richness was even augmented, the bases of the columns being carved, and the frieze sculptured. That portico has disappeared: the columns, indeed, still remain, having been used for the portico of the National Gallery, but the Order itself exists no more—at least not there. Another copy of it we now have in the Treasury Buildings, Whitehall, where it was

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applied by Soane, but with no great judgment or taste, his building being quite at variance with the Order he selected for it, the former being any thing but Corinthian in character. Perhaps he selected it, as we have done, for the purpose of exhibiting in two of his works such very distinct styles of Corinthian as are the Tivoli and the Jupiter Stator examples. As now altered by Mr. Barry, the Treasury Buildings have received a great accession of richness, and the frieze, which was before plain, is now ornamented. But the Order itself is not improved, at least does not show itself to the same advantage as before, by being raised so much higher above the eye than it was at first; it looks comparatively diminished, and the beauty of its details is lost. We have, indeed, the Order; and nothing is wanting but that impressiveness and effect which gave such charm to the portico of Carlton House.

As to that variety of the Corinthian which passes under the name of *Composite*, the reader may now, after what has been said and shown, be left to judge whether it can with any propriety be classed as a distinct Order, instead of being reckoned merely as a variety of the other, and by no means the most striking variety of that foliaged-capital class. The difference between the two extends to no more than a part of the detail of the capital, the general normal character of Corinthianism of which is no way affected. And if the Ionic Order be allowed to comprehend many decidedly marked varieties of the voluted-capital type, there surely can be no necessity for splitting Doric and Corinthian, and getting out of them the Tuscan and Composite Orders. It will, perhaps, be fancied by some that by thus reducing the number of the Orders to three, we in some degree limit the resources which the Architect derives from them. The fact, however, is precisely the reverse; for although we limit them in number and with respect to names, we set no limits to their respective powers. A hundred different examples, each marked by individual character, or peculiarity of treatment, may yet all belong to the same generic type or order; and three Orders endued with

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plastic energy, elasticity, and productive power, are far better than five, or even fifty formal, frigid, and feeble stereotyped, ready-made samples of columns to which we should be bound to confine ourselves. Ancient examples are not to be considered merely as *patterns*, to be copied mechanically, but received as studies for the Architect's guidance and instruction, which inform him what has been done, but allow him, should he possess sufficient inventive talent, to produce other compositions.

COLUMNIATION.

Columns and entablatures in themselves do not, properly speaking, constitute an Order, although they serve as specimens of it. They must enter into and regulate the organization of a structure before they can become by composition what is, strictly speaking, an Order. As exhibited in their temples, the system of columniation practised by the Ancients was strictly organic and natural. Instead of being something accessory, supplementary to, and independent of the fabric, that might be either omitted or applied at pleasure, as commonly practised in Italian and modern composition, the Order itself constituted the exterior of the building, at least of that side or front of it where it was introduced, when it was not continued throughout; so that the Order and its dimensions once established, and the mode of intercolumniation determined, the edifice shaped itself. Before we enter upon the subject of intercolumniation, it will be desirable to explain the various forms of temples, and the technical terms by which they are distinguished.

The *naos*, or *cella*, as it is more usually called, or temple itself, was comparatively small, even where the entire mass was of considerable size, gradual extension of plan being produced not so much by any great enlargement of the interior as by external columniation and its gradual development. It is probable that the earliest Greek temples consisted of the *naos* only, and were accordingly plain ASTYLAR buildings, or without columns, except in front or at the

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entrance end, where an enclosed porch was formed by continuing the side walls, and placing columns between them *in antis*, that is, between the two *antæ* or pilasters forming the ends of those walls. The next step seems to have been to advance the porch before the main building, instead of keeping it recessed within the side walls, thereby converting it from a portico in antis, into a *prostyle*, or projecting line of columns: thus a *distyle in antis*, or a portico consisting of two columns between antæ, consequently of three *intercolumns*, or open spaces between the antæ and columns, would become a *tetrastyle*, or projecting portico of four columns and three intercolumns. By the other end of the building being similarly treated, the temple became *amphiprostyle*, or prostyle at both ends, in rear as well as in front, the sides still remaining *astylar*. The next and last style of advancement was to continue columniation all round, enclosing the *cella* within colonnades along its sides as well as at its ends, which disposition of plan is expressed by the terms *peristyle*, or *peristylar*, and *peripteral*, which of necessity produces two columns and two intercolumns more in front; for what would otherwise be merely a tetrastyle prostyle, with four columns and three intercolumns (the number of the latter being always one less than that of the others), becomes by the colonnades being continued along the side, a *hexastyle* (*six* columns and *five* intercolumns); or if originally a prostyle hexastyle, it would be rendered an *octastyle* (*eight* columns and *seven* intercolumns), and so on.* It should be observed, too, that a building cannot at the same time be *peristylar* and have a *prostyle* portico, the latter being merged in the general columniation, instead of projecting from the rest of the edifice as a distinct feature. Of peristylar temples there were two sorts, viz. those with a single row of columns on each side, and those which have two, which last are distinguished by the term *dipteral*, i. e. having two wings or *aisles* on each side. Although it did not at all affect the

* By way of illustrating these terms more directly by instances taken from well-known modern porticoes which answer to the respective deno-

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general external appearance, notwithstanding that it extended the plan by adding two more columns and intercolumns to the front, this last-mentioned mode was attended with greater richness of columniation, and the inner columns contributed not a little to variety of effect and play of perspective; besides which, greater sheltered space was gained for ambulatories; whereas in the usual simple peristyle, where the space between the outer columns and the walls of the cella was limited to the width of a single intercolumn, the side colonnades were mere narrow passages, very little wider—at least in Doric temples—than the diameter of the columns themselves, consequently of very little actual service. In what is called the *pseudo-dipteral* mode, more of clear space within the colonnades was provided by omitting the inner columns, which mode reduced the plan to that of a simple peristyle, the only

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minations and distinctions above noted, we here give a classified list of some of them:

Distyle in antis.	Two columns & two antæ.	Three intercolumns.	St. Paul's, Covent Garden.
Tetrastyle.	Four columns.		Hanover Chapel, Regent Street. *Covent Garden Theatre.
Hexastyle.	Six columns.	Five intercolumns.	St. George's Church, Bloomsbury. *St. George's, Hanover Square. St. Martin's Church. *St. Pancras' Church. India House. Post Office. *College of Surgeons. *College of Physicians. *Colosseum.
Octastyle.	Eight columns.	Seven intercolumns.	National Gallery. Royal Exchange. British Museum.
Decastyle.	Ten columns.	Nine intercolumns.	London University College.

The porticoes marked with the * are simple prostyles, or *monoprostyle*, advancing only a single intercolumn forwarder than the rest of the building; while the others are *diprostyle*, or show two open intercolumns on their flanks; except Hanover Chapel, whose portico is partly prostyle and partly recessed, and that of the India House, which is entirely recessed, although its elevation is not a composition *in antis*; had it been such, it would have been a *tetrastyle in antis*, that and a hexastyle having the same number of intercolumns, viz. five.

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difference being, that instead of the width of a single intercolumn, a clear space, equal to two intercolumns and one column, was gained for the ambulatories. The Temple of Jupiter at Selinus was of this description, and being only octastyle in front,—the least possible width for a dipteral or pseudo-dipteral plan,—of the seven front intercolumns, four (*i. e.* two on each side) were given to the lateral colonnades, and only three left for the breadth of the *cella*, which must have looked like a smaller edifice standing within a colonnaded and covered enclosure.

The above few and simple arrangements of plan are nearly all the varieties that the Greek temple style offers; and some of them are little better than distinctions without differences, inasmuch as the differences do not affect general external appearance. Peripteral, dipteral, and pseudo-dipteral, all agree in the main point, and the two latter answer to the name of peripteral as well as the first, being merely modifications of it. Great as were its æsthetic beauties, Greek Architecture was—why should we scruple to confess it?—exceedingly limited in its compass and power of expression: what it did, it did admirably, but it confined itself too much to one idea. "When you have seen one green field," says Johnson, "you have seen all green fields;" and so we may say of Greek temples,—when you have seen one or two of them, you have seen all of them. However they may differ from one another as to the treatment of the Order adopted for them, the number of their columns, and mere particulars of that kind, they resemble each other very nearly in all leading points. Not only were their plans invariably parallelograms, but alike also as to proportion, forming a double square, or being about twice as much in length as in breadth; for so exceedingly *methodical* was the Greek system, that the number of columns on the flanks or sides of a peripteral temple was regulated and determined by the number of those in front. The number of the columns in front was invariably an even one, as otherwise there would be no middle intercolumn; but on the flanks of the edifice,

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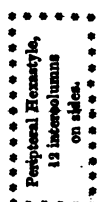
where there was no entrance, the number of the intercolumns was an even, and that of the columns an uneven one, so that a column came in the centre of these side elevations.

As to the mode in which the front influenced the sides by determining the number of columns for them, the established rule seems to have been to give the flanks twice as many intercolumns as there were columns at each end: thus the Parthenon, which is octastyle, has *sixteen* intercolumns, consequently seventeen columns, on each flank. In like manner, a hexastyle temple would have *twelve* intercolumns and thirteen columns on its sides. There are, however, exceptions; for instance, the temple at Selinus, which has been mentioned as an example of the pseudo-dipteral mode of columniation, is an octastyle, with sixteen, or just twice as many columns on its sides as in front; consequently the intercolumns are only fifteen, and being uneven in number, there is a middle one, as in the front itself. After all, the difference caused by there being an intercolumn more or less than usual is but a very slight one, such as is to be ascertained only by counting the columns, and such as not to occasion any perceptible difference in the general physiognomy of the building.*

Besides the restriction as to general proportion of plan, namely, the fixed relationship between the length and the breadth of the building, proportion with regard to height was limited in a different way, and in such a manner that the character of increased richness and importance derived from a greater number of columns was attended, not indeed by decreased height, but by *decreased loftiness*, or proportional

* Should the reader be quite fresh to the subject, he is recommended to draw out for himself,—merely roughly mark down,—the several dispositions of columns which have been spoken of; for by compelling him to consider them carefully, he will be better able to understand them, and have them distinctly impressed upon his memory. The annexed may serve as a specimen of such short-hand architectural notation, in asterisks.



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height, that is, height as measured by either breadth or length. Paradoxical as this may sound at first, nothing can be more clear when once explained. Discarding nicety of measurement, we will call a *tetrastyle* portico about a square in height, that is, about as high as wide; but add four more columns, extend it from a tetrastyle to an octastyle, so that it becomes about a double square in breadth, or twice as wide again, and the inevitable consequence is, that it is then only half as high as wide; that is, as to proportion, only half as *lofty* as it was before. The expression of *loftiness*, in which altitude greatly predominates over breadth, was quite beyond the reach of the Greek system. Their temples might be planted on lofty eminences, but the structures themselves never towered upwards. As far as it went, their *system* was perfect, —so complete indeed in itself as to be unfit for almost any other purposes than that for which it was expressly framed.

If the Romans corrupted the Greek Orders, the Doric and Ionic, they developed and matured the Corinthian Order, and also worked out a freer and more complex and comprehensive system of Architecture. To say nothing of their introduction and application of those important elements of both construction and design, the arch and vault—which hardly belong to a mere treatise on the Orders—it is to the Romans that we are indebted for varieties and combinations of plan that will be sought for in vain among Grecian structures.

Of the Romans it may be said, "Mutant quadrata *rotundis*," —circular forms and curves displaying themselves not only in elevation and section, but in plan; and while, among the Greeks, Architecture was confined almost exclusively to external appearance and effect, in the hands of the Romans it was made to minister to internal display of the most enchantingly picturesque kind, as would be amply attested by the Pantheon alone. In that edifice, and Hadrian's Mausoleum (now barbarized into the Castello di S. Angelo), the cylindrical form was exhibited upon an imposing scale; in the Temple at Tivoli, in far lesser dimensions, but with most captivating taste;

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and again in the Tomb of Cæcilia Metella, we have a fine example of an unbroken *astylar* circular mass. In such structures as the Colosseum and other Roman Amphitheatres, a different form of curvature, namely, the ellipsis, was employed with admirable propriety and effect. In interiors, again, we find the hemicycle or concave semicircular form both frequently and variously applied by the Romans in such edifices as their Baths, which afford many excellent studies for combinations of *plan*.*

To enter into the system of Roman Architecture as the subject itself would require, would very far exceed our present purpose and limits; much less can we pretend to treat here of the still more varied and complex Italian or Modern-European system, into which *fenestration* so largely enters, *columniation* being, more frequently than not, subordinate. Were we to touch upon the last-mentioned style and its various elements, it could be only so superficially as to be more disappointing than instructive. Better that the reader should admire our forbearance than complain of our unsatisfactory jejuneness. We may, however, permit ourselves to throw out one or two general remarks; the first of which is, that it is a great error to confound with the Italian the two Ancient Classical styles, applying to them alike the epithet 'Grecian,' merely in contradistinction to Gothic or Mediæval Architecture. It is absurd, too, to pretend to test by the Greek style, one so totally differently constituted as the Italian; an error that could hardly have been fallen into but for the practice of applying the same names to very different things. The term

* That it is possible, however, to miss the beauty of rotundity or convert it into deformity, and further, to make ugliness still uglier by means of so-called embellishment, is proved far more convincingly than satisfactorily by the interior of the new Coal Exchange, of which the citizens are nevertheless, it seems, not a little proud, and by which, if we are to believe the puffs of the penny-a-liners, foreigners are not a little struck, as indeed well they may be, with that equivocal sort of admiration which in plain English goes by the name of *astonishment*.

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'Order' has quite a different meaning, as applied to the original classical mode of the Art, from what it has in the other. In Italian composition, an Order is more frequently than not, mere decoration in the shape of columns and entablatures, fashioned *secundum artem* (a very different thing from *artistically*), so as to resemble in detail and certain conventional distinctions those of the Ancients. Infinitely better would it have been, if, instead of allowing themselves to be misled by the pedantry of Vitruvius, the Architects of the so-called Revival, who showed much happiness of invention in other respects, had treated the Orders freely; or perhaps still better, had they worked out ideas of their own for columns and entablatures, whenever they had occasion for them either as matters of necessity, or as mere decoration. Had the Italians allowed themselves greater latitude in that respect, they would, in all probability, have been far less licentious upon the whole than they frequently were, and their buildings would have been more homogeneous—more of a piece. But they must, forsooth, be Doric, Ionic, or Corinthian, ofttimes all the three at once, and a very great deal else into the bargain. Therefore the affecting to retain the ancient Orders in their purity served no other purpose than that of making all the more evident how completely their first intention and character had been lost sight of. However well intended, most unfortunate and mischievous in its results was the course taken by Palladio and other cinque-centists, of establishing an express model pattern of their own for each of the Orders. Such truly Procrustean mode of securing orthodox conformity was better suited for, and more calculated to produce, automatons than artists; and it is one that inflicted upon Architecture an incalculable amount of dulness, with regard to the treatment of the Orders themselves, and of utter licentiousness in every other respect.

The clinging with scrupulous punctilio to what had become dead-letter forms after the system which had produced them had been abandoned and exchanged for another and widely

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different one, was merely superstition and pedantry. It might show acquaintance with traditional learning and the writings of Vitruvius; but it also showed dulness of æsthetic feeling, or, what is not much better, deficiency of æsthetic power. There was, however, one mode of applying columns, which, although generally regarded as the most licentious and unorthodox,—nay, even preposterous, because quite contrary to all classical practice and precedent,—has at least one propriety, that of being rational, since columns there officiate as columns—as real supports; whereas in a great deal of Modern Architecture that is admired for the correct taste it displays, columns and their entablatures are mere expletives, instead of actual component parts of the fabric, and simulate a mode of construction neither required for nor practised in the fabric itself. The particular mode here alluded to is that in which arches are not only introduced together with columns, but the arches and columns are so indissolubly married together that they cannot be divorced, inasmuch as the arches are supported by the columns themselves, the former springing immediately from the capitals of the latter.* Such combination, it might be supposed, would be gladly admitted as sufficiently legitimate, both because in accordance with rational architectonic principles, and because it greatly extends the resources of the Art; nevertheless, such is the omnipotence of prejudice, that instead of being welcomed and adopted by us, it has been decried as a barbarism. As an irresistible and crushing argument against it, we are told that columns were not *originally* intended to be so applied;—ad-

* This mode of uniting together columns and arches is perfectly legitimate, whereas that in which a fragment of the usual entablature is left sticking or added to each column, (as, for instance, in the interior of St. Martin's Church,) is decidedly solecistical, since it is injuriously reminiscent of *epistylar* construction or trabeation,—is in itself unmeaning, and causes the columns to appear to have been too short, and therefore to have been eked out in height by blocks upon them, fashioned to resemble so many detached bits of an entablature.

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mirable logic, truly! There are a great many other things besides columns which have in course of time come to be applied to uses not originally contemplated. In regard to that combination of columns and arches according to which the latter spring immediately from the others, and are supported by them, there are two questions: the first and practical one is, Do the columns afford sufficient support?—the second and æsthetic one is, Is there also appearance of sufficient support; or, is there any thing contradictory to principle, to judgment, and good taste? The first question needs no answer, since it answers itself, it being an indisputable fact that columns so employed do answer the purpose to which they are turned. The other question is not so easily answered: the prejudiced will of course answer it according to their own contracted taste and narrow notions, condemning the mode alluded to, without any inquiry into its merits and advantages, merely on the ground of its being quite at variance with the classical system of *trabeated* columniation, that is, with columns supporting a horizontal architrave and entablature, or general horizontal *trabeation*. That by the substitution of arches for architraves, the character of the Greek system is forfeited, cannot be denied; but then another character is established, whose difference from the original one ought not to be made its condemnation. To demand of a different mode that it should resemble and conform to the laws of that from which it differs, is absurdity in the extreme, for it is requiring that it should be at once a different one and the same. To compare different styles is a very useful sort of study; but to make any one style the criterion or standard by which others are to be judged, is preposterous.

The style in which the arch and column enter into direct combination with each other, and for which there is no specific name, has at all events some economical recommendations, inasmuch as shorter columns, and fewer of them, are required, than would be necessary for the same height and length according to the trabeated mode. In itself, too, it possesses

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much 'capability;' yet, as is the case with every other style, the merit of the works produced in it depends upon the manner in which it is treated, and the talent brought to it. There is no style of the Art so poetical that the flattest prose may not be made out of it; and hardly any so utterly prosaic as to be incapable of being kindled into poetry by the Promethean torch of geniality—artistic treatment, and, *con amore*, æsthetic feeling.

INTERCOLUMNIATION.

Although Intercolumniation consists only in regulating and determining the spaces between the columns, and consequently does not affect the nature of the composition,—for a tetrastyle, hexastyle, &c., would still be such, no matter how narrow or wide the *intercolumns* or intervals between the columns may be,—very much depends upon it, with regard to expression and effect. How intercolumniation is regulated in the Doric Order has been already explained at page 20: in that, the distances between the columns is governed entirely by the triglyphs of the frieze, so that there can be no medium between *monotriglyphic and ditriglyphic* intercolumniation, accordingly as there is either one or two triglyphs over each intercolumn. But in the other Orders there is no such restriction; in them the intercolumns may be made wider or narrower, as circumstances require, but of course under the guidance of judgment and good taste; for what is left *à discrétion* is not always very discreetly used. Vitruvius and his followers, however, have not cared to trust to individual discretion or indiscretion, but have fixed certain positive and distinct modes of intercolumniation, viz. five,—perhaps out of compliment to the *five* Orders, to wit:

Pycnostyle, or *closely set*, in which the intercolumns are one diameter and a quarter, or a half, in width.

Systyle, in which they are two diameters wide.

Eustyle, or *well spaced*, in which they are two diameters and a half.

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Diastyle, in which they are three diameters.

Araeostyle, or *thinly set*, in which they are four diameters.

Let us repudiate for Architecture all such formal act-of-parliament legislation, and take pycnostyle and araeostyle as the greatest allowable degree of closeness or of distance at which the columns can be placed; and it follows that between such maximum and minimum any intermediate measure is admissible, and that there is no occasion to fix it positively and arithmetically, and make distinctions which are, after all, only arbitrary. There are a great many matters in design which must be left to the Architect, and intercolumniation is one of them. It is not possible to have precise rules for every thing, neither is it desirable; for if every thing in it could be done by rule, Architecture would forfeit its nature as one of the Fine Arts, and be reduced to a merely mechanical one. What is done by rule can be done by one man just as well as by another.

Excepting the terms pycnostyle and araeostyle, which are useful as expressing the greatest degree of closeness or of openness of intercolumniation consistent with well-proportioned arrangement, the others may be dispensed with. To designate one mode as *eustyle, par excellence*, is very much like saying that the proportions assigned to it, viz. 2·30′ or 2¼ diameters, are the very best, and all the rest comparatively defective; according to which doctrine, the *monotriglyphic* mode of intercolumniation usually employed by the Greeks in their Doric temples, and which answers to the character of pycnostyle, is not so well proportioned as what is emphatically called eustyle. Let it be whatever it may, as expressed in terms of the diameter of the columns, intercolumniation should always deserve the name of eustyle, or *well-proportioned*, by being such as satisfies the eye, and contributes to the particular character that befits the occasion and harmonizes with the other proportions of the structure. Pycnostyle, or *close spacing*, carries with it the expression of both richness and strength, the solids or columns being very little less than the voids or inter-

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columns. Aræostyle, or *wide spacing*,—and *ditriglyphic* Doric intercolumniation may be called such,—produces an effect of openness and lightness, but also partakes of meagreness and weakness, owing to the want of sufficient apparent support for the entablature,—a very frequent fault in Modern Architecture, where frugality as to columniation has often been allowed to produce a degree of poverty which contrasts very disagreeably with that of the decoration affected by the Order itself. Intercolumniation ought to be made to depend in some measure upon the nature of the composition: a tetrastyle portico, for instance, or a distyle in antis, admits of wider intercolumniation than would be suitable for an octastyle, because pycnostyle, where there are only three intercolumns, would produce too great narrowness of general proportions for a portico.

Hardly is there need for observing, that be their proportions what they may, the intercolumns in a colonnade or portico must be all alike; nevertheless in a Grecian Doric portico there is, as we have seen, some difference, the two extreme intercolumns being there narrower by the width of half a triglyph. There is, besides, another exception from the general principle, for the centre intercolumn of a portico was frequently made somewhat wider than the others, in order to mark the entrance, and the better to display and afford greater space for access to the door within.

Another mode of columniation and intercolumniation is that which has sometimes been practised by Modern Architects, and combines the two extremes of pycnostyle, or still closer intercolumniation, and aræostyle. This consists in coupling the columns and making a wide intercolumn between every pair of columns, so that as regards the average proportion between solids and voids, that disposition does not differ from what it would be were the columns placed singly. Although denounced by some critics, more especially Algarotti, as altogether licentious and indefensible, and although it is not to be especially recommended, or indeed practicable on

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every occasion, the coupling of columns may, under some circumstances, be not only excusable, but advisable and proper. As is the case with almost everything else in matters of art, all depends upon *how* it is done, and whether with or without sufficient reason. That there is no classical authority for it, is no valid reason against it; in the constitution of the ancient temples there was nothing to require or *motive* it. It may be conceded, however, that coupled columns, forming a prostyle surmounted by a pediment, are objectionable; because where so strong a resemblance to the antique model is preserved in other respects, a departure from it in regard to the disposition of the columns has a disagreeably disturbing effect.

SUPERCOLUMNIATION.

Although Supercolumniation is not warranted by Greek precedent in the application of the Orders, it may not be improper to take some notice of it here, in connection with the subject of Columniation generally. The placing one tier of columns above another, whether both tiers were of the same or two distinct Orders, was not practised by the Greeks, at least not for the exterior of their edifices, but merely within them, as in the *cella* of what is called an *hypæthral* temple, having a range of columns along each side, above which a series of shorter ones were placed for the purpose of rendering the total height equal to that then occasioned by the upward-sloping roof.* Very little, however, is now positively known respecting such upper Order in the interior of a temple, nor do conjectural representations of such expedient for eking out the required height by means of two tiers of columns with no more than a horizontal beam or architrave between them, say much for it on the score

* In his 'True Principles of Beauty' Mr. Fergusson has shown very ingeniously how the whole interior of such temple could have been roofed over,—whether it actually were so or not,—and at the same time light freely admitted. The idea is as valuable as ingenious, because applicable on many occasions to modern practice among ourselves.

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of æsthetic appearance. The system of piling up Orders, or different stages of columns, one above another, originated with the Romans, yet even with them it was not employed for their temple architecture or other structures exhibiting what strictly answers to the idea of columniation, but merely such as were upon too large a scale to admit of the application of columns at all as their decoration, otherwise than by disposing them in tiers, and so dividing the elevation into a succession of stories one over the other. This method was afterwards adopted by the architects of the Palladian school, and has been occasionally practised in this country. The front of the Banqueting House or Whitehall Chapel* is one noted instance of it; and another more recent one is the new portion of the Carlton Club House. The first-mentioned building—all that was ever executed of Jones's magnificent scheme for a metropolitan royal palace—exhibits two Orders, viz. Ionic and Corinthian on an exceedingly low rusticated basement; which last would have been better had its small blank windows been omitted, or had they been expunged when the front was renovated, by the courses of masonry being continued uninterruptedly: for, evidently useless, they are also the reverse of ornamental, inasmuch as they occasion a look of ordinariness and littleness. The other building, which is undisguisedly a copy of Sansovino's Biblioteca di San Marco at Venice, with some slight variations,† similarly exhibits two Orders—a Doric and Ionic; and the latter, whose capitals are far more satisfactory representations of Ionic than those in Jones's work, is remarkable for its violation of all precedent and rule; its entablature being increased to double the height usually assigned it, or even rather more. Yet great as

* It is a pity that when the two fronts of this building were repaired and restored some years ago, that its north and south ends were not faced with stone.

† That is, as regards the mere external plane or geometrical elevation; for, as Mr. Garbett has pointed out (page 104 of his Treatise), the disparity between the original and the copy is in other respects quite prodigious.

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is the license, it is productive of grandiose effect by the entablature serving as an adequate crowning to the entire elevation; whereas, in a single Order placed by itself, the like proportions would show as preposterous; although there would not, in such case, be what here renders the great exaggeration of the upper entablature all the more evident,—namely, immediate contrast between it and the one below, which ought, *secundum artem*, to have been the heavier of the two, since it belongs to the Doric Order. The success of the license proves it to have been a *masterly* one,—that of an artist who showed himself privileged to break through precedent for himself and to set precedent to others, as has been the case in the Pall Mall structure.

Sometimes all the three Orders are employed in as many tiers of columns or pilasters. In other cases, the two extreme Orders,—that is, the Doric and Corinthian,—are brought together; of which what is now the inner court of Buckingham Palace affords a more striking than satisfactory example; for, as if on purpose to produce decided architectural antithesis—not to call it incongruity—different styles as well as Orders are there placed in immediate contact with each other, the upper one being Corinthian and the other a Greek Doric, not only of exceedingly plain but of very imperfect and anomalous character, since, instead of being rendered more than usually ornate and befitting a palace, the frieze is suppressed altogether, and nothing left but a mere blank surface beneath the cornice.*

The convenience attending supercolumniation is, that by placing one Order upon another, greater altitude is gained without corresponding increase of dimensions for columns and

* Had it even been intended to convince us how unfit the Greek Doric is for combination with any other, and with fenestration and Italian modes of composition; — how insignificant and poor it shows when executed on a petty scale and reduced from the rank of principal to that of a subordinate in the general design;—hardly could it have been accomplished more completely than it was in Nash's design for the Palace.

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entablatures. Yet that is counterbalanced more or less by sundry inconveniences. One of them is, that unless the same Order be employed throughout and repeated for every vertical division of the building, there are as many different characters, or what ought to strike as such, as there are Orders. Another is, that altitude is obtained not by continuity, but rather by interruption and addition,—by breaking off and then beginning afresh, as it were: consequently the greater the number of the Orders so employed, the more diminutive do they become in comparison with the general mass of the edifice. Nor is it the least inconvenience or objection of all, that the more highly enriched and delicate capitals and cornices, being the uppermost ones, are removed out of sight, they being upon no larger scale than they would be were the same Order, having columns of the same diameter, placed upon the ground. It would seem, then, that some exaggeration is not only allowable but requisite to make up for what is lost by disproportionate distance,—that is, a distance out of proportion to the scale or actual dimensions of the object. The details, for instance, which would show themselves distinctly were the Order placed on the same level or thereabouts as that on which the spectator stands, lose much of their effect and importance if removed to double that distance from the eye, or perhaps more, without being, therefore, at all increased—if anything, rather diminished in size; and not only that, but the intercolumns in the upper tiers become wider than those below.

ANTHROPOSTYLE OR ANTHROPOMORPHIC PILLARS.

As human figures have sometimes been employed in lieu of columns, and as both classical precedent for such *Anthropomorphic* pillars is furnished by a small building attached to the Erechtheum at Athens, *Anthropostyles*, or statue-columns, may now without impropriety obtain some notice here, although they were not spoken of in our original edition.

The distinctive names given to male figures of the kind are Persians, Atlantes, and Telamones: the first, which is a rather

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vague and arbitrary one, to those in loose attire or imaginary Persian costume; the second, to those which are placed under an architrave, in the attitude of Atlas supporting the globe on his shoulders; and that of Telamones (from the Greek τλάω, to bear or support) to such as somewhat similarly support an entablature, with bended arms and their hands on their shoulders.* For female figures the general term is Caryatides, which are almost uniformly represented in an erect attitude, without any apparent effort to sustain any burthen or load, as is the case with Telamones and Atlantes, both of which manifestly display strength and muscular action. Another distinction between male and female figures of the kind, which ought to be attended to, is that the former admit of being greatly enlarged beyond life size with far less impropriety than female ones; there being something less unnatural in the idea of a colossal man than of a colossal woman. Caryatides, therefore, are fitter for such purposes and situations as do not require them to be of inordinately gigantic stature.

Anthropomorphic pillars can, of course, be employed only in rare and exceptional cases, if only on account of their expensiveness; yet that is no reason for prohibiting them altogether, which many, it seems, now would do, as little better than arrant absurdities, notwithstanding the classical authority for them. Yet, if there be absurdity in employing statues to perform an office which living persons could not, it is still absurd, though perhaps in a less degree, to put them in niches, or on the tops of buildings, where we should feel alarm at seeing any one standing. No one in his senses mistakes a stone figure for a living human being, more especially if it be larger than life and employed as an architectural member. The chief circumstance that might fairly be urged against statue-pillars has been overlooked,—namely, that the general shape of the human figure is the reverse of that required for a

* The entrance loggia of the new Imperial Museum at St. Petersburg has ten colossal figures of this kind, placed sideways (therefore facing each other) against the piers and their antæ.

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column, inasmuch as it is much smaller and slenderer at its lower extremities than across the chest and shoulders, therefore resembling what is called a *terminus* (a bust or half-figure growing out of a pedestal which tapers downwards). In the Greek Caryatides, however, of which we have examples, the dimensions below suitable to a column were produced in the happiest and most satisfactory manner by ample drapery descending in folds quite to the feet, so as to render the whole of the lower part of the figure from the waist a solid mass of stone, of bulkier proportions than any Doric columns, the entire figure being only four diameters high; which proportions entirely contradict the ridiculous notion of the Doric column being proportioned according to the male, and the Ionic and Corinthian according to the female figure.

As the architrave could not rest immediately upon the head of the figure, in order to lessen the idea of pressure and to produce architectonic junction between such pillar and its entablature, the head has a sort of cushion or cap on it, and upon that is placed a carved echinus and its abacus. Modern architects have occasionally placed a complete Ionic or Corinthian capital on the heads of their Caryatides. Some have also suppressed or cut off the arms of their figures, as is the case with the celebrated Caryatides by Gougeon in the Louvre.

Were it not that so obvious a principle has frequently been strangely violated by modern architects and sculptors, it would scarcely be necessary to observe that in all anthropomorphic pillars, constrained postures and attitudes of action should be avoided. The expression should be tranquil and quiescent; there should be a certain degree of architectonic formality, but without stiffness, and the figures should appear, in military phrase, *to stand at ease*.

Had Inigo Jones's ideas for Whitehall been realized, the grand circular court of that palace would have exhibited the greatest display of anthropomorphic pillars ever attempted in modern times, for there would have been two Orders of them, viz. r

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lower one of Persians or draped male figures beneath a Doric entablature, and the upper one of Caryatides, with capitals and entablature of the Corinthian Order, making in all sixty-four such statues; the male ones 24 feet high, the others 21 feet. Yet it may be questioned whether so many human figures placed between arches and windows, after the manner of engaged columns, would not have produced a somewhat uncouth though certainly a most striking effect, and have dwarfed the rest of the architecture.

Besides entire figures, either Hermes' pillars or Termini are occasionally used as substitutes for columns of the usual form, when required to be only on a small, at least a moderate scale. The first mentioned consist of a square shaft with a bust or human head for its capital; the latter of a half-length figure rising out of, or terminating in, a square shaft tapering downwards; which diminution at the base is, however, evidently improper where such figures are employed not in lieu of statues, but of columns supporting an entablature. Hermes' pillars seem to be in greater favour with modern German than with English architects. The former have not unfrequently employed them for the decoration of windows, and sometimes without observing any sort of tolerable proportion between the bust and the shaft on which it is placed, the latter being so extravagant in height as compared with the other, as to suggest the not very agreeable idea of a head stuck upon a pole; at any rate, the head itself is dwarfed into insignificance, and shows little better than a mere ornamental knob.

While we are upon this subject, it may not be altogether improper to offer a few remarks relative to the employment of statues as architectural decoration: notwithstanding that the Greeks applied sculpture to their edifices very liberally, it was almost invariably in groups of figures placed within a pediment, and in reliefs upon friezes, or in frieze-like panels, rarely if ever in the form of single statues. The Romans, on the contrary, affected statues, in which taste they have been followed by the moderns, sometimes with more of lavish prodigality

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than propriety. Besides that, figures of the kind can never be properly viewed, or indeed, otherwise than to great disadvantage, when planted up aloft as acroteria upon a pediment, or on the pedestals of a balustrade (the usual mode of disposing them), where they become little more than mere accessories, and of little or no interest whatever in themselves: they seem to stand very insecurely in such situations, and produce no better effect than so many pinnacles; consequently, if at all numerous, impart to the summit and skyline of the edifice a certain bristling appearance, better suited to the character of the Gothic than of the Classic style. Nevertheless, the hoisting-up fashion has been carried to such preposterous extent that even the monumental portrait-statues of eminent public men—of which the features ought to be plainly distinguishable—have been exalted to such an unhappy pitch of loftiness that all likeness, except it be that lodged in a cocked-hat, is lost. A huge solitary column is itself a solecism, and a puerile though pompous conceit, notwithstanding that there is Roman precedent for it; but to place what purports to be not a mere figure but a portrait-statue on the summit of it, is to add to solecism nothing less than downright blunder.

There are many ways of disposing statues in combination with architecture, which would not only be much more rational, but be attended with greater artistic effect than those that have hitherto been usually practised. Of statues within porticoes, or occupying the extreme intercolumns of a portico or colonnade, we have no examples. Neither have we any instances of their being applied in connection with the extreme columns of a portico, by being placed either in front of, or laterally to them. The pedestals at the extremity of the stylobate on which the portico of the National Gallery is raised present an admirable situation for figures of the kind, as do also the open colonnades at Hyde Park Corner.

We have now terminated our examination of the Classic Orders, explaining their elements, constitution, and several

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characteristics, an acquaintance with which forms, indeed, but a small yet a very essential portion of architectural study. By restricting ourselves to bare matter-of-fact, by being less minute in our remarks, we might within the same compass of pages have produced a treatise that would have been at once more copious and more superficial. Proceeding upon the principle of *multum haud multa*, we have endeavoured to engage the reader's attention, and induce him to take an interest in the subject by pointing out to him reasons and causes, and thereby putting him in the way of thinking for himself. Should we have effected that, and should we have disabused him of the prejudices, and the crude, confused, and contracted notions generally entertained in regard to the Orders, even by otherwise well-informed persons; or should we have armed him against them, we shall have accomplished the *multum*—the main point of all, and shall have prepared him for acquiring the *multa*, or further information from other books, with comparative facility. *Much* shall we have taught, and much will he have learnt, should he now reject the equally vulgar and absurd doctrine of the Five Orders, relinquishing it to schoolboys and schoolmasters,—to the plodders who work by pattern, and design by rote and routine. Much, very much will have been learnt by the reader, should he have learnt from what has here been said, to observe and compare, examine and reflect, and to regard the so-called Orders not with the eyes of a mere builder, but with the intuition and feeling of an artist, receiving them only as general types of their respective characters, which, after being diligently studied, are, instead of being slavishly copied, to be freely treated with congenial gusto.

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APPENDIX.

RUSKIN'S DOCTRINE CONCERNING THE ORDERS.

HAVING gone through the THREE original and strict Orders or families of columns, explained their elements and constitution, and vindicated for them artistic independence of those petty, cramping, and debasing rules, which would render them so many dull, stereotype forms, and cold, petrified ideas,—we come now to speak of what we have thought advisable to reserve for this place, instead of stopping to notice it while speaking of the Ionic Order. Since the publication of the first edition of this treatise, some marvellously original views concerning the Orders have been broached by Mr. Ruskin, a gentleman of no small celebrity, it would seem, as a most eloquent writer and an equally profound thinker,—profound enough, no doubt, because if there be any meaning at all in some of his thoughts and expressions, it lies at such fearful depth below the surface, that, without making a descent in a diving-bell, it is impossible to get at it. Starting a perfectly novel theory, without the slightest misgivings as to its practical value, he makes short work with the Orders, by reducing them to two, viz. Doric and Corinthian, and getting rid of the difficulty attending the existence of another, by the simple and assuredly very convenient process of boldly denying the Ionic to be any Order at all; after having previously (in his 'Seven Lamps') insolently stigmatized its capital as "an exceedingly base invention." Nor is 'insolently' at all too strong a term for the occasion, for insolence assuredly it is for a man bluntly

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to vilify what has all along been admired as a beautiful combination and ingenious adaptation of graceful curvatures and flowing forms, without condescending to allege any sort of reason for heaping upon it the virulent and wholesale abuse which he does. However, that belongs to Mr. Ruskin's peculiar mode of criticism; for though he is apt to descant with tedious prolixity on the forms and carvings of mouldings, and similar minutiæ, when it comes to deciding the reputation and character of an entire style, a single defamatory epithet is made to do the work of execution, and slay indiscriminately whatever is so unlucky as to belong to the style that happens to be spoken of. Thus we are assured that our English Perpendicular is '*detestable;*' the entire art of the Renaissance,—or that which has prevailed, more or less throughout all Europe, from about the middle of the fifteenth century,—is nothing less than '*pestilent;*' and Alhambra ornamentation is, after the same fashion, despatched to the shades at once by the stiletto term '*detestable.*' In imitation, perhaps, of Hamlet, he 'speaks daggers' more than once, condensing both accusation and verdict into a single reproachful word; which species of brevity on such important occasions is all the more remarkable and unsatisfactory, because he frequently indulges in mere frothy, vapouring cant to such extent that it would be wearisome, did not its grotesque absurdity render it amusing.

Drawn by his crotchety fancies into a dilemma, Mr. Ruskin had no other alternative than either to renounce the honour of forming a perfectly new theory, or to strike out the Ionic from the number of the Orders; so, with consummate modesty, he adopts the latter course. Never was there, nor ever can there be, he says, more than two primary Orders, or distinctive classes of columns, which are to be ranked as Doric or Corinthian, accordingly as the general profile of the capital is of convex or concave curvature. Now, were there no objection to this dogmatic assumption—and it is certainly nothing more—it may fairly be alleged against it as a defect, that it makes the entire character of an Order to concentrate in the capital,

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and, moreover, in one single circumstance of it, namely, its general outline or contour. No account is taken of proportions with regard to the column, or of actual bulk in the capital itself (in which last respect the Corinthian differs from the Doric as widely as in every other particular); none of expression, or the degree of it, whether it be that of plainness or embellishment, of simplicity or luxuriance. In fact, according to Mr. Ruskin's doctrine, a capital might be transformed from Doric into Corinthian, or *vice versâ*, without any other change than that of converting its profile from convex into concave, or from concave into convex; which assuredly goes far to convict it of defectiveness, if not of absurdity also.

On finding that the theory he had adopted afforded no room for the Ionic, either as an independent Order or a satellite one of either of the others (as the so-called Tuscan may be said to be of the Doric, and the Composite of the Corinthian), almost any one else would have suspected that he had committed an oversight. Not so, however, Mr. Ruskin; he hews through the Gordian difficulty at once, by boldly asserting Ionic to be no real Order, but merely the 'phantasm' of one. The phantasm, forsooth!—would that we could exchange some of our realities for phantasms half as good! Now, so far is it from being either a phantasm or chimera, or capricious abortive attempt, that it was an actual living style, fraught with vital energy, and displaying various moods of beauty, formed upon one common type, however dissimilar some of them may be from others. If not an Order, it was at all events a *Style*, which is something infinitely more and better; and it was one of the only two styles which can properly be called Greek, for if the Corinthian or foliaged capital was originated by the Greeks, the Order itself or Style was developed and perfected by the Romans. That Ionic has been degraded in modern times from its original and real to a merely nominal rank,—deprived of its power and privileges as a Style, and reduced to the subordinate condition of a mere Order, in the technical, low, and limited meaning of such term, is not to be denied;

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but then that is no more than what has happened to both the other Orders likewise. We have Doric buildings,—that is, buildings put into the livery of Doric columns,—but otherwise without a particle of Doricism, or even artistic *nous* in them; and, in like manner, Corinthian ones without aught of Corinthianism save the ordinary badge of it.

Besides being extensively practised by the Greeks, and so far of incontestably classical legitimacy, the Ionic has always maintained its rank as a distinct Order, even when known only through the medium of enfeebled and insipid Roman or Italian translations of it, which are for the most part such as almost to justify Mr. Ruskin's condemnation of the capital, notwithstanding that such examples were in their time considered not only irreproachable, but so positively excellent as neither to require nor admit of improvement. Now granting for mere argument's sake that so far from deserving censure for his unqualified vituperation of the Ionic capital, Mr. Ruskin is entitled to praise for having risen above inveterate prejudices; that he is in the right, and it is the Greeks themselves, and the admirers of the Ionic dialect of their architecture, who have been all along in the wrong, we have reason to become exceedingly mistrustful of Greek taste in other matters also, more especially when we find that Mr. Ruskin has "convicted" the Greek *fret* of ugliness,—at least so he fancies, and has so decided. Happily, however, for the Ionic capital, he gives us to understand that he can assign no better reason for his dislike to it than that contained in the well-known lines—

"I do not like thee, Dr. Fell," &c.

Our pity, therefore, may be transferred from the Ionic capital to Mr. Ruskin himself, and the unfortunate idiosyncrasy of his taste, which, while it is shocked at the baseness of invention displayed in the Greek voluted Order, is quite in raptures with the barbarous façade of St. Mark's at Venice, which he, with consummate intrepidity, declares to be "as

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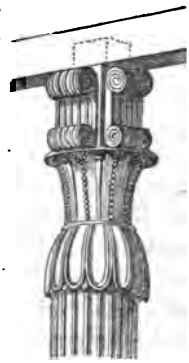
lovely a dream as ever filled the human imagination!"—a dictum that ought to pound the Parthenon into dust.

With regard to the actual origin or invention of the voluted capital, a new hypothesis has lately been started by Mr. Fergusson, in his 'Elements of Beauty in Art;' which derives it from the class of Persepolitan capitals represented in the annexed figure, and which he calls *Proto-Ionic* (*i. e.* First or incipient Ionic). The discovery of any element of the Greek voluted capital in that truly monstrous combination of incoherent forms is at all events ingenious, because few will be able to detect any similarity whatever between that and the Ionic capital, even when directed to look for it. There is, indeed, on each face of the upright block forming the third or top division of the capital, a sort of *volute* or scroll, partly unrolled and curling up again below; yet between such inconsiderable, fragmentary, and seemingly purposeless bits of detail, and such an admirably adjusted composition as the Greek Ionic capital, the difference is immense. There is scarcely any analogy whatever between the two, except that the volute or scroll shape occurs in both,—but as to resemblance, it is no other than that between Macedon and Monmouth which is pointed out by Fluellen. The very particular that is supposed to constitute likeness, serves only to render the disparity between the two styles of capital all the greater; wherefore, if the Persepolitan one was really the germ out of which the other developed itself, we have an instance of the most marvellous artistic transformation that ever was accomplished; in which arbitrary nonsense is exchanged for admirably studied æsthetic effect,—deformity is metamorphosed into beauty, and uncouthness transfigurated into loveliness and grace. The referring us then to such source for the origin of the Ionic capital, is far more complimentary than not to the



Proto-Ionic capital, Persepolis.

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taste of the Greeks, and not to their taste alone, but their power of felicitous invention also; since to be able to discover the elements of beauty buried beneath ugliness is surely *invention* of the most enviable kind; to be able to transmute barbaric lead into the noblest æsthetic metal is the worthiest species of alchemy.

Although the foregoing derivation of the Ionic or voluted capital appears somewhat visionary, it may be accepted as an instructive myth, exemplifying the possibility of extracting pregnant hints and happy ideas from the most unpromising sources.

However amusing it may be to note fancied or even real yet accidental resemblances of the kind, it is quite futile to attempt to establish any sort of theory as to the origin of particular architectural forms from the similarity they happen to bear to other objects, let it be ever so distinct. In a note at page 13, what the Doric capital bears a likeness to has been pointed out, but most assuredly we do not for a moment suppose that its configuration was derived from what may be made to exhibit the same combination of square and circular forms as the Doric abacus and echinus. Neither can any person in his senses imagine that the so-called 'Horse-shoe' arch of the Arabians was purposely so fashioned in direct imitation of the ignoble thing whose name we have given to it. Nay, it is somewhat strange, that those who first bestowed such undignified appellation on it, should not have perceived its resemblance to a Mahommedan symbol, and have denominated it the CRESCENT arch;—which, it deserves to be remarked, accords so admirably with the *crescent* or bulbous domes which are such frequent features in the same style.

To quit these digressional and perhaps somewhat too discursive remarks, we return to what gave rise to them, by standing up for the beauty of the Ionic capital quite as boldly, and with quite as much show of reason, as Mr. Ruskin has denied it. Fortunately, his sneers and carpings at Greek architecture are rendered comparatively harmless,—at any rate, somewhat

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amusing, by the highly-laboured sentimental twaddle with which they are worked up, as for instance in what he says at page 341 of his 'Stones of Venice,' concerning the Greek scroll, which he supposes, or pretends to suppose, to have been intended to represent or symbolize the sea!

For contradicting Mr. Ruskin, we have sufficient precedent, and that too furnished by himself, since by no one has he been more flatly contradicted as to what he says in one place than by what the very same John Ruskin has uttered in another. He may, indeed, be best described in his own words, as "an idler on the earth, chasing the shadows of his own fancies;" and who more than once plunges plump into arrant nonsense in his will-o'-the-wisp chase after peregrine, fantastical phrases, and alembicated, double-distilled conceits.

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APPENDIX.

ON THE POSSIBILITY OF A NEW ORDER.

It will not be irrelevant to our purpose to say something concerning the invention of a new Order, or, rather, the possibility of such invention, which has almost invariably been denied, not only in a very peremptory and off-hand manner, but, strange to say, with a sort of scornful exultation at the failure hitherto attending every attempt to make any addition to the present Orders; and some have thought to settle the matter for ever by the equally *naïve* and stolid remark, that 'We do not *want* any other Order, those already known being quite sufficient for every purpose'! And so it seems, when we find a single pattern example of one and the same Order can be made to serve for a score of buildings, all different in purpose.

Premiums have been offered for a new Order, but in vain, for they have elicited nothing better than some feeble and insignificant variations of the Corinthian capital, more or less inartistic also. Other attempts have been made, and they have been all more or less signal failures. What then?—the attempts themselves convicted those who made them of being so utterly destitute of all æsthetic power and feeling, that it would have been a miracle had they succeeded. Marvellous also would it have been if the mere offer of pecuniary reward, let it be ever so liberal or even extravagant, could call forth an original conception of the imagination, just when it was asked

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for, more especially if asked for at a time when all exercise of aught worthy the name of artistic imagination had been stifled, and in a manner forbidden. Inspiration will not obey even royal commands: the hour of its coming no man can tell; only when it does come, let it be *welcomed*.

The teaching and training pursued with regard to the Orders as established by methodized system, were better calculated to produce a blind superstitious reverence for mere traditional forms and mere conventionalities than to lead to really thoughtful study and thorough artistic examination of them. Although those examples which had been set up as standard models of them were inferior to or else widely different from the types they were supposed to represent, they were regarded as so perfect of their kind, that the idea of treating them at all otherwise than according to what had become prosaic routine, was scouted as reprehensible; while that of improving upon them (*i. e.* the several Orders as then practised) was looked upon as downright insanity.

Under such circumstances, what hope was there of any one producing, not a new Order, but even so much as a new capital stamped by original conception, and well studied in all its details? All artistic imagination in Architects had been as unnaturally stunted, dwarfed, and crippled as the feet of Chinese females; so that it would be hardly less hopeless for one of the latter to attempt to rival Atalanta in swiftness, than it was for any Architect of the seventeenth century, or even later, to essay aught that should be worthy of the name of a new Order, however new it might be in itself.

Owing, perhaps, to the ignorance of what really constitutes an Order, two primary conditions appear to have been overlooked by every one who has hitherto attempted to devise a new one, — the First of which is, that novelty of character shall extend itself to every part, so as to produce quite a different *whole* from any of the other Orders; — the Second, that such whole, though marked as distinct from and independent of the other Orders, shall nevertheless show itself to belong

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the same common family. Whereas the difference aimed at has been either too partial and inconsiderable for the fulfilment of the first condition, or else so inordinately great as to show utter disregard of the second.*

Now, in the former of these two cases, we do not, indeed, obtain a new Order, yet it is very possible, by adopting such course, to produce satisfactory varieties of the existing ones, and proceeding by degrees, and idea being added to idea, perhaps ultimately to arrive at what shall have grown up to be a distinct Order as compared with those which we now possess. This will, of course, be met by the '*No innovation!*' cry, which cry and that *for* originality, clashing together, perplex us not a little, since the one prohibits what the other demands. This contradiction is partly occasioned by 'originality' being always taken in a good sense, and 'innovation' in an unfavourable one,—an absurdity which is ably exposed by the late Sydney Smith. "To say that all new things are bad," observes that shrewd writer, "is to say that all old things were bad in their commencement; for of all the old things ever seen or heard of, there is not one that was not once new: whatever is now establishment was once *innovation*."

It is somewhat remarkable, too, that those who deprecate innovation as opening the door to licentiousness and all sorts of 'new-fangled' whims, nevertheless tolerate the adoption of many tasteless solecisms and caprices, provided they be *old-fangled* ones instead of new. Although they are scandalized at the idea of any one's attempting—or, as they term it, presuming—to produce an original composition for a capital founded upon the antique, yet avowedly quite different in design, they do not object to our employing the poorest and tamest Italian versions of the Orders, the poverty-stricken Italo-Ionic capital included. Surely there exists talent at the present day, in the middle of this so much vaunted and self-vaunting nineteenth century,

* Emlyn's 'British Order' was an extravaganza of the kind; the column consisting of a single stem below and then dividing itself into three slenderer ones, after the manner of a tree!

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capable, if not of rivalling the classical antique, of surpassing by many degrees the taste of the Cinquecentish and first Architects of the Renaissance. If not, it is not for want of more abundant studies, though, perhaps,—for it is actually possible,—the very abundance of our studies may, by subserving to our indolence, have led to a result as unfortunate as unintended,—namely, that of sparing us the trouble of all further *thinking*. In fact, the lesson, of course decently disguised, has hitherto been—Do not presume to think for yourself at all in matters of taste and design; in them you have only to abide by what is already provided for you, and if people admire what is so produced, you may take all the credit of it to yourself; if not, you throw the odium of its bad taste upon those from whom you merely borrowed it. For every style alike, all further exercise of the inventive faculty is now interdicted, under the pretence indeed of maintaining the style itself intact, but also, it may be suspected, because indolence and incapacity find their account in such prohibition, as do critics likewise,—the latter being in their turn spared the trouble of carefully examining and thinking for themselves, they having merely to ascertain whether the work be *secundum artem*, or according to established recipe, and give their verdict accordingly. For whether it be in producing, or judging of what is produced, rules, which are but partial at the best, and may be erroneous also, are substituted for principles, and prejudice for rational appreciation. While Architects are expected to be artists, and to show themselves such, they are forbidden to avail themselves of the privilege belonging to them as such, and so, in the present unhappy state of their art, become no better than mere copyists. The very methods taken to preserve the art from corruption have deprived it of its former vitality;—preserved it, no doubt, they have; but how? by *mummyfying it*, by bandaging and swathing, by spicing and pickling it, and then exhibiting it in its rigid lifelessness and inert saplessness. Without some infusion of fresh thought from time to time to repair its

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wasted energy, Art degenerates into mere Handicraft or little better; and is reduced to such a system of mechanical process, that, provided the means afforded them be the same, one man's work is almost as good as another's, nor does the best show us more than cleverness and taste in the application of previously existing ideas.

Hitherto the study of the Orders and similar matters has by most mischievous perversion been made, as Garbett well observes, to serve as the *substitute for thought*, and to blind us to the possibility of devising any other æsthetic modes of decorating columns than those which the Greeks and their immediate imitators have bequeathed us; for, be it observed, setting aside general forms and proportions, the conventional details resolve themselves into decoration. Of course such decoration ought to be analogous to the character of the leading forms and proportions, but otherwise admits of being almost infinitely modified and varied, as may best accord with other circumstances, and best befit the actual structure. Were that done, or allowed to be done, we should not see nearly the identically same columns (the differences between them being scarcely perceptible to any but a practised eye) applied indifferently to an hospital for lunatics, a custom-house, a post-office, a national museum, as the chief, and in some cases as the sole architectural badge, bestowed upon them as a cheap substitute for actual design, that is, cheap as sparing the labour of thought and study. No wonder, then, that such plodding mechanical routine should have brought discredit upon the whole of that modern Pseudo-Greek system; the only strange part of the matter is, that crude and incoherent patchwork, without any attempt to reconcile the conflicting elements, and the harshest contrasts merely put into juxta-position with each other, and so left, should have been tolerated. Nevertheless, it was not only tolerated, but admired and defended, upon the principle that the Order so applied being untouched, the purity of the style indicated by it was preserved from modern corruptions. The regard so

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shown for purity of style might, however, without great uncharitableness be ascribed either to indolence or incapacity, or else to a degree of indifference truly discreditable to a follower of any of the Fine Arts.

If nowhere else, surely some latitude of design in the treatment of columns and entablatures becomes quite allowable, and in some degree called for, in interiors, such at least as do not profess to be of monumental character. Yet, whatever may be the Order adopted for such purpose, no regard is had to the difference of situation and other circumstances, but the example selected as the model is copied with most provoking fidelity, because, besides being pedantic and slavish, it may be improper also, or at all events it operates injuriously, by depriving our Architects of opportunities of experimentalizing with the Orders, where they might do so at little or no serious risk, because even failure would comparatively be of no material consequence. Besides, what does it avail that the columns and entablatures in a room are perfectly legitimate and orthodox, and according to accredited antique examples, if after all, as is generally the case, they are rather accessories than principals in the ensemble? *Pure* Corinthian columns, or whatever else they may happen to be, do not exactly harmonize with rococo-looking chimney-pieces and ceilings, or with fantastically crinkum-crankum Louis Quatorze furniture. At any rate, if we have actually studied the classical Orders to any purpose, and familiarized ourselves with the gusto of the antique generally, we ought to be able now to infuse something of the spirit and temperament of that style into our own conceptions. The possibility of doing so is indeed hardly to be questioned, when we find that Sculptors, and even Architects, can produce original ideas in correct classical taste for vases, candelabra, and similar productions of artistic design, for which no positive and pedantic rules have been laid down,—rules which, though they serve to bolster up mediocrity, and help mechanical dulness to pass itself off for art, operate as a clog upon genuine talent. We might

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now be permitted to correct the error, well-intentioned as it was, committed by the leading Italian Architects of the sixteenth century; who by *formalizing* the Orders, and giving each of them stubborn fixity, with little regard to correct æsthetic principles, deprived them of their original plasticity and vitality. It should, therefore, now be our endeavour to *unformalize* them again, for general use at the present day; nor should we think of affecting Hellenism by a rigorous adherence to Greek models of the Orders, except in those comparatively rare cases, in which such style can be consistently adhered to, and fully carried out.

That another Order, which should prove decidedly distinct from those already known, yet at the same time partake of the same general physiognomy, and be likewise all-compact and consistent in its several parts, should be struck out at a heat, should, like as Minerva started from the brain of Jove, issue forth complete in every point from a single mind, is hardly to be looked for; yet, were greater latitude of design granted to Architects, were they not only permitted, but encouraged to break through the present system of stereotype forms and details, instead of being deterred from any attempt to do so by the opposition, if not ridicule also, they are now certain of encountering, surely some among them could show themselves capable of giving us something better than crude fancies and random caprices. Those who scout the notion of that being possible, must suppose modern Architects to be, one and all, so totally destitute of artistic talent and intelligence, as to be unable to deviate from the strict letter of antique precedent, without forfeiting its spirit also, and running into extravagance and absurdity. We do not ask them to turn their backs upon precedent,—on the contrary, to keep their eye upon it, and to study it diligently, not with their eyes alone but with their brains also; should they have done which they will hardly be in any great danger of going far astray. Former unsuccessful and ridiculous attempts of the kind prove nothing to the contrary, but merely that those who made

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them were utterly incompetent to engage in them, inasmuch as they betrayed more or less, evidently either utter disregard, not only of precedent, but of rationality and the principles of artistic composition, or else immaturity of ideas, and sterility of imagination.

Of course it is not for every one to endeavour to break away from the trammels of literal conformity to precedent, either as regards the Orders or any thing else in architecture: nor indeed is it for any one to do so without due consideration, and without feeling satisfied that he can fairly account to himself and others for what he has done. Rash innovation upon established forms is, most assuredly, to be deprecated; yet, for rashness, there is as little necessity as there is excuse. Everything of the kind can be adequately tested beforehand, that is, previously to being actually carried into execution, by means of drawings and models, submitted to the opinion of competent judges. Studies of detail, whether as regards columns or anything else, are for the employment of an Architect's leisure hours, when he can apply himself quietly to the shaping and working out experimentally such fresh ideas as may have occurred to him, and which he ought to have noted down at the moment that they did so, revolving them, in the interim, in his mind. Were fresh ideas to be carefully and patiently *elaborated* and then revised, there would be little danger of their proving when produced to the public no better than crude abortive fancies, of which latter and downright barbarisms in composition we meet with not a few, even where the Order itself is correct, although it is so merely because it is a literal transcript from some standard example of it. Yet what avails such partial merit, which after all is but a borrowed one, if all the rest be quite at variance with it?* If we are not at all scandalized at

* The background or inner wall of the portico of St. Martin's church, and indeed the whole exterior of that building, affords a strong instance of utter incongruity of taste and character between the structure itself and the columns and pilasters with which it is decked out.

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wholesale innovations in design, we might surely be less intolerant of partial innovations in matters which are comparatively only those of detail.

We shall, perhaps, be reproached with encouraging a hankering after, and "a morbid taste for variety, merely for variety's sake." Yet surely there is a healthy taste of the kind, as well as a morbid one; and if too great laxity and licence in regard to the exercise of invention tends to corrupt architecture, the restricting Architects to certain stereotyped forms for each of the Orders, or for whatever else may be the indicial features of the style employed by them, is to degrade both them and the art itself, by converting the latter from a Fine Art into one of mere routine and mechanical process. And if, as has lately been hinted, architecture affords at the present day scarcely any opportunity whatever for the further display of artistic mind and power, the sooner its followers renounce the ambitious title of Artists, and content themselves with taking their position along with engineers, surveyors, and builders, the better. Were greater freedom of design with regard to the separate constituent members of a style *permitted*, there would, in all probability, be, together with less of sameness in things of the same style, a far greater degree of conformity to one general style. The continual repetition of the same features, with little other change than that of transposition, soon causes a style to appear hackneyed and worn out. It is made to appear unable, because not allowed, to accomplish anything further: the consequence is, that satiety of it produces a sudden and capricious defection to some other quite different one, or even to several others simultaneously, of very opposite characters, and belonging to widely distinct periods, all however resembling each other in regard to being treated alike, namely, according to *precedent*, —*alias*, according to the system of mere copyism. The style of almost every century since the Conquest has now its new-hatched representatives in the nineteenth, which it seems is fain to take them just as it finds them, as if they were, one

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and all, so thoroughly fitted to our present habits, wants, and purposes, as not to require to undergo any modification in order to adapt them to greatly altered circumstances.* Such architectural transplantings from by-gone times partake more of the nature of exhumations than *revivals*, not a spark of fresh active vitality being imparted to the original stock, which in every case seems doomed now to remain petrified, and so far, lifeless; whereas the architecture of the 'Renaissance' was an actual 'revival,' till it was nipped in the bud and checked by the formalists and precedent-mongers of the sixteenth century.

Instead of pursuing any further these ungracious yet not unwarrantable strictures upon the practice of confining ourselves to *ready-made detail*, we come more directly to the point, as far as the treatment of the Orders is concerned, by remarking that even where some modification of any one of them has been ventured upon, it has been confined almost exclusively to the capital, comparatively little or nothing having been essayed in regard to bases and shafts, even by those who have aimed at producing an entirely 'New Order.' Yet even Bases afford considerable scope for the display of thoughtful design, although they seldom admit of being made to consist of more than a series of mouldings. Fergusson, indeed, is of opinion that ornament may without impropriety be bestowed upon the foot of a column somewhat freely, as being clearly visible in such situation. The propriety of doing so depends, however, upon the situation of the columns themselves. The degree and sort of enrichment that would be unsuitable for bases standing immediately upon the ground or floor, would display itself strikingly in internal situations where the columns were raised upon a stylobate of such height as would allow their bases to be closely examined. Yet, however the base may be enriched or its depth augmented, the capital ought to preponderate both in its bulk and its decoration.

* The present Babel of styles and confusion of tongues in architecture will cause sad perplexity to future antiquaries.

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With regard to the *shafts* of columns, they not only admit of other modes of fluting than those now practised, and which are in fact limited to two,—one appropriated to the Doric, the other common to both the Ionic and the Corinthian order,—but they are susceptible of varied ornamentation of a different kind. Where a more than usual degree of richness is aimed at, carving upon the lower part of the shaft, immediately above the base, can hardly fail to produce it. It is, indeed, what there is no precedent or warranty for in the pure antique, but there is in many of the Renaissance and our own Elizabethan examples; and *Fas est et ab hoste doceri.* No matter whence or from however impure a source a good idea be derived, so long as it be good in itself, and capable of being turned to better account than it hitherto has been. In all art, whatever is successful—whatever is productive of genuine artistic effect, is, *de facto, legitimate,* whether it be warranted by precedent or not. No matter how unclassical the style from which its adopter derives it, provided he can turn the hint so obtained to good account, and, by improving upon it, make the so borrowed idea another and his own.

One or more ornamental bands so slightly raised as not at all to break the general outline of the column, or excite the idea of discontinuity, but merely produce variety of surface, is surely a very warrantable mode of decorating the shaft. It is but a futile objection against it to say, that such bandeaus cut the shaft into so many separate pieces, for it would be nearly as reasonable to say that a bracelet twined round a lady's arm appears to dissever the limb, or else cause it to look as if it had first been broken and then bandaged. It is possible to be too precise in such matters, and some are so ultra-rational that they would strip architectural design of almost everything that does not show itself to be expressly called for by actual purpose. Pediments over windows, key-stones to arches, coffered domes, ornamental masonry, or what is called *rustication,* even pilasters themselves, have all in turn been assailed by the strait-laced hypercriticism of pedants, puritans, and ultra-

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rationalists, who care not of what or how many resources they deprive design, their business being not to design, but to set themselves up as dictators to those who do.

Very good reason, however, there is for objecting to the practice, even yet not entirely abandoned, of making the shaft of a column consist of *frusta*, alternately round and square, since that certainly does cut up and disfigure the entire shaft, more especially as the blocks or square pieces are made larger in diameter than the others, although difference of form would distinguish them sufficiently, if not even too much. When columns of the kind are attached to a rusticated wall, and the blocks upon the shafts correspond with the alternate courses of the masonry, so that the columns and wall appear bound together, such mode is tolerably allowable; whereas blocks of the kind upon insulated columns are a downright barbarism, and produce no other effect than that of grotesque clumsiness.* Still it does not follow that the shaft of a column on no account admits of anything extraneous being attached to it. For instance, a circular medallion affixed midway the shaft, and corresponding in its diameter with that of the column at that height, would be an equally striking and novel, and certainly not inelegant piece of decoration,—one, moreover, that would admit of infinite variety, and of being rendered significant also. A round plane or disc affixed to a cylindrical surface would exhibit a strong contrast, produced entirely by circular forms differently applied.†

That such hitherto untried ornamentation for the shaft of a column would be reprobated at once and off-hand by orthodox writers of a certain class, who, if they do not exactly admire, can tolerate, columns encumbered with a series of heavy square

* As may be seen by the columns of some of the porches to houses in the lower part of Regent Street, near Waterloo Place; where, besides being ugly in themselves, they are quite out of keeping with the fronts to which they are attached.

† Having introduced columns so decorated into a design of his own, the author feels little doubt as to their proving satisfactory in execution.

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blocks upon them, is beyond doubt, there being ample precedent for the latter in the works of Italian Architects, but, as far as we are aware, none whatever for the mode here proposed. It is to be regretted, that a slavish and superstitious regard for *precedent* should be allowed to bar out all further invention, and thereby bring one important branch of architectural design (composition being the other) to a stand-still. We employ the styles which we adopt merely as so many dead languages of the art, incapable of admitting new words for the purpose of better describing new objects and expressing new ideas. A-propos to what has just been said, it will hardly be from the purpose here to meet, even if we cannot remove, an apprehension entertained by one Reviewer, whose judgment we are far from calling in question, because on its first appearance he spoke of this Treatise in most flattering terms. "Whilst we should rejoice," said that writer, "in seeing architectural genius developing itself in forms of beauty hitherto unappropriated, is there no danger of Mr. Leeds's advice being acted upon too literally for the credit of the national taste, or of those who may thus be tempted to degrade it in the estimation of strangers? There is." Certainly, no doubt, there is some danger; the question is, whether it would not be outweighed by great advantages. Besides, the advice is to be received *cum grano salis:* by no means either was, or is it, the author's intention to recommend that every one, whether gifted or not, with inventive power combined with artistic feeling and judgment, should break away from the beaten, therefore the safe, track, of established practice and authority. But are none to be bold, lest some should be rash and fool-hardy?—are none to be free, lest many should abuse their freedom? Are the vigorous and active to be for ever doomed to accommodate their pace to that of the indolent or the feeble? The many must be left to go on as they do now; but let us not, therefore, by invariably exacting strict compliance with the letter of precedent, debar those who are capable of doing so from advancing at all further. As an instructor and guide, Precedent claims our

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dutiful respect; but we have converted it from a teacher who informs, into a tyrant who enslaves our minds. Nay, Precedent itself rebukes us, our present system of design being quite different from that of other times, when, instead of merely repeating parrot-like by rote what it had learned from the past, design freely appropriated such new forms and appliances as circumstances might dictate. Although the PRINCIPLES OF ART ARE IMMUTABLE, ITS PHÆNOMENA ARE VARIABLE, AND SUSCEPTIBLE OF ALMOST INFINITE DIVERSITY.

Unhappily for both architecture and ourselves we have fallen into a double mistake, that of overlooking Principles, and of blindly adhering to and following Precedent, even when it leads us quite astray. It may, too, fairly be suspected, that it is in consequence of our ignorance or else disregard of the first that we submit as tamely as we do to the tyranny of the other. Our ultra-sticklers for the rigorous observance of precedent as the *sine qud non* condition for excellence, insist upon the observance of it because there they feel themselves upon safe ground. They know what is according to Precedent, and what is not; and in the latter case condemn and set it down as bad without further inquiry, having no other criterion than Precedent by which to judge, wherefore they treat every deviation from it as no better than very dangerous architectural treason and sedition.

To literal adherence to Precedent without regard to aught further than the most prosaic compliance with some particular example of an ancient order, may be ascribed the neglect into which the Greek and Roman columnar system has now fallen. So far were we from imparting any fresh elements of design to it, we did not, generally speaking, even catch its spirit; for had we done so, we might, ere now, have succeeded in *naturalizing* it among us. It might have been made to strike root here firmly, and then to shoot forth fresh branches, and to develop its powers still further in new but cognate and congenial forms of beauty. We *stuck it up* in its native purity as we

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fondly imagined, its Orders being jealously kept intact; but, as surely might have been foreseen, it soon showed itself to be dry and sapless, wherefore we have now kicked it away.

Pretty much the same is it with every other style which we take up, forcibly transplanting it from its native soil of some former age, into our cleverly contrived *nineteenth-century conservatory*, to be there tended by precedent-adoring copyism. Changing our simile, we may allow copyism to be in some respects a useful nurse, at any rate a convenient one; but it is also a *dry-nurse*, one wholly incapable of affording any sustenance to its charge. It can bandage it in swathing-clothes, and fondle and dandle, and sing lullabies to it,—and they are not unmelodious even to some older ears; it can cram down the ready-prepared pap of precedent, but can supply no nutriment whatever from itself. Is Architecture now doomed to be henceforth ever in the leading-strings of some former style, and never again be trusted to go alone, as it was wont to do in former times? Fain would we hope not, although for such hope there is at present very little ground. As yet the present century, which has displayed such marvellous inventive power in other departments of human ingenuity, skill, and industry, has in that of Architecture produced nothing which it can fairly claim as its own. At once proud, and needy, and indolent, it is content now to subsist upon borrowings, without even putting any of those borrowings out to interest, so as thereby to accumulate in time a fresh capital of its own.

Precedent merits our respectful regard, and attentive earnest study; it is for our instruction and guidance; it is a servile, bigoted reverence for it that is to be deprecated,—that anile and superstitious veneration for the past, which, by making the past a barrier against all further advance, inflicts an injury upon the present, if not the future. Crying out to us, "Thus far shall ye go, and no farther," it presumes to set limits to our faculties. It commands Architecture to look only in one direction, and that is backwards. No wonder then, if, like Lot's wife, Art has now become converted into a pillar of salt,—

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a mere rigid, inert body, retaining indeed its former outward shape, but devoid of all principle of vitality and motion.

To maintain that it is impossible for us now to add aught to any style, or at all to enlarge it by gradually introducing other forms and elements,—but of course in accordance with the original ones,—is very much like declaring Architecture to have become quite worn out and effete, and wholly incapable of producing more than it already has done. Orthodox such view of the matter may be, but assuredly it is not very cheering, nor at all calculated to excite and invigorate the artistic faculty. In like manner as a living language is continually receiving accretion and extension by means of new words and phrases, although its body and constitution remain unchanged, so a *living architecture*—a style actually practised by us—should be considered susceptible of similar increment; since, otherwise, it is reduced nearly to the condition of a dead one; and though by so employing it we may mimic the details and some of the separate features of its original productions, it is impossible for us to preserve the original physiognomy, unless we also adhere in every respect to express models, which, so far from being adapted to our actual present requirements, are more or less at variance with them, sometimes completely so.

We certainly have no occasion for Greek temples nor Roman amphitheatres, yet need we not therefore discard the ancient Orders and Greek and Roman elements, which are far better adapted for general application than are those of any mediæval style. Let us then avail ourselves of them, not literally but freely, and with artistic intelligence and feeling. What would be the actual result of such emancipation from what others deem wholesome restraints, but, in our opinion, are no better than fetters that enslave and manacle those who should be free, yet after all are no check upon general bad taste,—we pretend not to predict. If we are questioned as to that, our reply must be, like Fergusson's—We cannot tell. Possibly one result would be our obtaining what might fairly be accepted as a NEW ORDER; or if not, we might succeed in

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shaping and working out for ourselves a really living and life-endowed style, based upon that of the antique, informed with kindred spirit, and stamped with kindred beauty and grace.

THE EFFECT ATTENDING COLONNADING AND ARCADING.

MUCH as has been written upon Architecture, one important circumstance appears to have generally escaped attention, neither notice being taken, nor explanation given of it,—which is, that columniation, or rather colonnading, is productive of a species of decided artistic effect unattainable in astylar composition, and likewise in that quasi- or semi-columnar mode according to which columns show themselves only as decoration in relief upon the face of a wall. Similar and equally indefeasible effect attends arcading, whether the arches be supported by piers or columns.* The sort of effect alluded to is, moreover, wholly irrespective of style or design, or indeed any æsthetic qualities or their contraries, since it manifests itself in the most opposite styles—in the most ponderous Egyptian as in the lightest Gothic, in the arcaded courts of the Alhambra as well as in the peristyle of a Greek temple or the Parisian Madeleine. Although not adverted to in professedly didactic works, the effect here spoken of never fails to make itself felt, although few seem able to account for it; and it is recognized and acknowledged in the expressive phrase 'pillared scenery;' pillars, no matter how denominated technically, or to whatever style they may belong, invariably conducing, although, of course, not always in the same

* The term '*columnar-arcading*' would be convenient as describing and distinguishing the latter mode.

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degree, to scenic and picturesque * character. The question then is, to what is such effect to be ascribed? The reply is, to what when once pointed out will be thought an exceedingly simple matter in itself, valuable as it is for its results. It arises then from the *duplication* of planes and surfaces, and the increased play of perspective, thereupon consequent. Nor is it owing to the more decided pronunciation of perspective alone, but also to that of chiaroscuro, as regards forcible contrast of light and shade, that both colonnading and arcading are productive of peculiar expressiveness.

Important, however, as the study both of perspective and chiaroscuro, or the distribution and apportioning of light and shadow, is in architectural composition, it is scarcely ever touched upon; or, if touched upon at all, is instantly recoiled from. Neither is sufficient attention given to outline, whether in respect to elevation or plan, as productive of or contributing to the other two sources of artistic composition. It seems to be generally considered sufficient if taste be shown in the individual features and details of a design; yet although as far as it goes, that is undoubtedly a merit,—indeed one that ought to be made almost a *sine-qud-non*, it may not redeem from general insipidity, or from feebleness of expression and effect; more especially if mere finical elaboration *à la Denner*, that hardly shows itself,—at least does not show itself distinctly in the executed structure, has been trusted to for producing effect.

The one kind of artistic merit ought invariably, when

* After his usual oracular fashion, Mr. Ruskin defines the picturesque to be 'parasitical sublimity;' which is no doubt a very sublime, because an exceedingly obscure explanation—an Hibernianism that, which must be pardoned. No doubt, the sublime may enter into and enhance the picturesque; but the latter quality is surely quite independent of, and oft-times quite at variance with, the other. What, for instance, is there of the sublime, either parasitical or genuine, in a squalid, tumble-down hovel, in a thistle-eating donkey on a common, in a group of impish village children, or in many other objects which painters relish on account of their *picturesqueness*?

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possible, to be associated with the other. There ought to be what is impressive, striking, and captivating at first sight, and also what will afterwards detain and gratify it. Nevertheless, of general effectiveness of ensemble comparatively little account is taken, notwithstanding that an enduring charm attends it, its influence like that of a fine prospect making itself felt unconsciously; whereas beauties of detail, like those of the parterre, require for the due appreciation of them to be minutely examined one by one. Even, too, as the most beautiful flowers and shrubs will not form a beautiful landscape, so neither will the most unexceptionable details form a fine piece of Architecture.

Valuable, however, as are perspective effects and those of light and shade in both interior and external Architecture, they appear to be almost always the result of mere accident rather than of study and forethought. Whenever they do occur, it is generally because they could not very well be avoided. Little pains seem to be taken to insure them; which is, perhaps, partly because such matters are passed over without notice in professedly didactic writings, and partly because professional men are in the habit of attending too exclusively to mere geometrical appearance, as shown either by elevation or section.

One of the most sensible things Mr. Ruskin has uttered, is his advice to students to "think in shadow,"—to which may be added, and in perspective also; for like those of light and shade, the accidents of perspective produce spirited variety, and impart the allurement of picturesque apparent irregularity and fortuitous combination of parts, where perfect symmetry and correspondence of parts are perceived by the mind to exist. The value of perspective effect may perhaps be best appreciated by the absence of it; owing to which latter it is that those unacquainted with the nature of geometrical representation look at elevations and other drawings of the kind with indifference, if not with dislike also, as being no better than technical, formal, and lifeless images of what they are intended

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to show; in short, as belonging to the class of mere pattern and working drawings,—more especially if they happen to be those for an unexecuted building. Most assuredly such drawings neither are, nor claim to be, regarded as pictures, yet supposing them to possess due artistic merit, they ought to be recognized as productions of art; because, as Jovellanos has well remarked,* the sole merit which an architect can claim as purely his own, is that derived from the *forte*—the taste or the talent manifested in his ideas. The design of an edifice once perfected, its author's task in his capacity of artist or architect proper is terminated; for in all the subsequent operations of execution he officiates only as the superintendent or director of the works, or perhaps that charge is confided to some one else.

Very much more might be added on this head, but what has already been said will in all probability be deemed irrelevant to and widely digressive from the subject first started, and with having started which we will now content ourselves, serving both topics just as Alcibiades did his dog's tail—perhaps, too, for a somewhat similar reason.

WHAT STYLE?

THOSE who declaim so virulently against all kinds of shams, imitations, deceptions, and artifices in Architecture, that they seem to make no distinction between such innoxious untruths and the scoundrelism of lying, or the villany of forgery and false-coining,—those same outrageously virtuous, yet not particularly nice or over-scrupulous persons will nevertheless

* In his 'Elogio de Don Ventura Rodriguez,'—a most interesting piece of artist-biography, and not least of all so on account of its very copious notes, which comprise among other matters a rather extended disquisition concerning the character and origin of Gothic Architecture. As to Ventura Rodriguez, it may not be quite unnecessary to state that he was the great architectural star of Spain in the last century.

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freely swallow, and encourage others to do the same, one particular species of unveracity—for 'lying' is an ugly word—by the wholesale. So far from making any objection to it, they earnestly recommend our reverting to and counterfeiting for the nonce some one of the by-gone mediæval styles; and systematically adopting some particular architectural *disguise*—which it ought to be, they are not yet agreed upon—as the most suitable and becoming costume and uniform for the buildings of this strongly although not strangely anti-mediæval nineteenth century! which said century, rich and all-potent as it is in other respects beyond any of its predecessors, either is, or is made to appear, utterly bankrupt in matters of art, and forced to bolster itself up to the best of its ability with Pre-Raffaelitism in painting, and modern mediævalism in Architecture.

While numerous inventions and improvements in building and in all the mechanic arts subservient to that of Architecture have come up, we are called upon to ignore or abandon them by restricting ourselves to that for which precedent may be found in the edifices produced in the earlier periods of our civilization. Yet that any one mediæval fashion of building, whether English or Continental, can be found which would now be applicable to all kinds of buildings alike,—without being which, it could never become a universal style,—is exceedingly doubtful, or rather just the reverse, there being little or no doubt as to its impossibility. For churches, indeed, and for such quasi-ecclesiastical buildings as colleges and schools, also hospitals and almshouses, mediæval Architecture may still be consistently employed, it having been all along extant among us in those classes of buildings, many of whose structures are coæval with what are the 'foundations' of former centuries. In such cases architectural archaism contributes to character by the decided contrast it presents to the physiognomy of secular edifices. Whatever some may think or say to the contrary, the influence of association has much to do with Architecture, quite irrespectively of æsthetic con-

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siderations. And with regard to the classes of buildings above mentioned, the archaism which may without impropriety or affectation be observed for them, is akin to that which tinges our version of the Holy Scriptures, and the language of our Church services, and which constitutes a peculiar style widely distinct from that of both our ordinary language and our secular literature.

Even were it practicable—which may very well be questioned—to revert now for general purposes at the present day to a style of Architecture which never contemplated, consequently could not possibly provide for them, would be rather preposterous, and would perhaps be attended with consequences the reverse of satisfactory to those who advocate its being attempted; if only because it would be absolutely necessary to innovate very freely, and in many cases to go quite contrary to precedent, unless essentials were to be sacrificed to appearances. One strong objection, were there no other, against the re-instating Mediæval Architecture as a catholic or national style, is, that it would be eminently artificial in principle, inasmuch as it would be at variance with our habits, with our tastes in all other respects, and with the general tendency and temper of the age. There is besides one stumbling-block difficulty—one calculated to set the several partizans of mediævalism at loggerheads—to be got over in the first instance,—namely, the choice of the particular style to be adopted. A strong and withal a strange feeling seems to have come up in certain quarters of late in favour of Italo- or rather Veneto-Gothic, as being so expressly suited to all purposes, that, without undergoing the slightest modification, examples of it would be thought quite at home even in the region of Pall Mall. Yet in our opinion that particular style is best characterized by the term we once heard applied to it, of 'Old-maidish Gothic'—stiff, formal, prim, and meagre, and afflicted with a most disagreeable starvation look.

Renouncing Mediævalism in Architecture as little better than mere mummery at the present day; to what style then

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are we to look as that which would best serve us as a model on all occasions? The reply is at hand; that of the Renaissance, — vituperated, indeed, by John Ruskin, but ably vindicated by Charles Barry. Yet though we would advise the keeping *to* it, we would not advise the keeping *it* itself just where it is, but that we should endeavour to carry it on still further, purging it of its defects, which are not few, supplying its deficiencies, which, in comparison with our present greatly enlarged requirements, are many; and infusing into it that further plasticity which might without difficulty be imparted to it.

Renaissance and Greco-Italian—taking those terms in their widest signification—possess upon the whole far more in their favour for actual practice at the present day than any other style whatever. They constitute in fact the modern European style, as contradistinguished on the one hand from those of ancient Greece and Rome, and on the other, from those of mediæval Europe,—a style which, so far from having to be imported, has already struck root here so deeply that it has become almost impossible now to eradicate it. And what is perhaps not least of all in its favour is, that it is by no means yet worked out, in some respects hardly yet fully developed; nor is it so provokingly perfect, that we need absolutely to despair of improving upon it, or feel ourselves doomed to the bitter mortification of finding nothing left for us to do than to repeat by rote the ideas of those who have gone before us.

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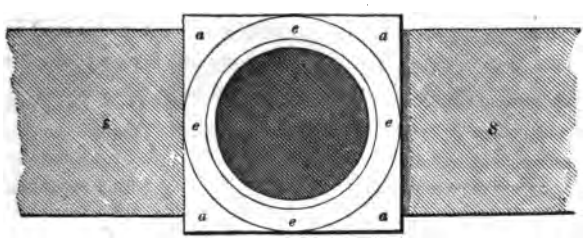
GLOSSARIAL INDEX.

We here make one alphabetical arrangement serve the double purpose of an Index referring to the pages where the respective matters are treated of, and of a Glossary affording explanation, or further remark, as may be, where required. This latter is by no means to be considered a complete or general Glossary of Architectural Terms, but merely as an accompaniment to the present Treatise, and a specimen, perhaps, of what is still a desideratum, namely, a *real Lexicon*—that is, one which explains *things* as well as terms—of ancient and modern Architecture, similar to what has been provided with regard to the Mediæval Styles of the Art.

Abacus.—The *plate* or shallow block forming the uppermost member of a capital is so called for the sake of distinction, for when a similar one is placed beneath the base of a column, it is called a *plinth*. The Doric abacus is spoken of at page 14, and is here shown in a plan of



the capital and architrave; *a a a a* being the angles of the soffit or under-side of the abacus which overhang the echinus *e e e e*; and *s s* the soffit of the architrave. From this, the relation between the abacus and architrave, and how much the former exceeds or projects out beyond the latter, will be better understood than by the engraving at page 13, where the capital is shown only in *elevation*.

The next figure is still more indispensable for understanding the

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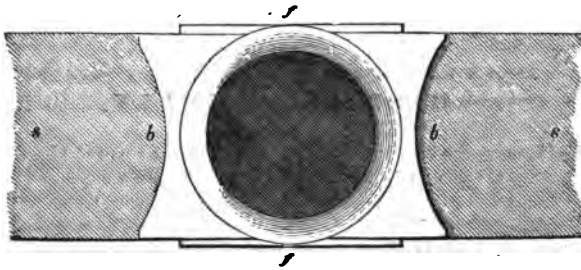
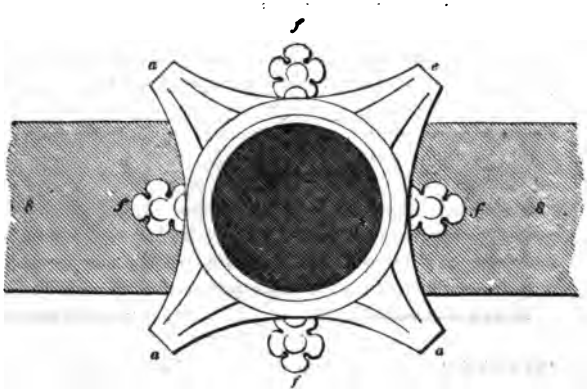
conformation of the Ionic capital. (See page 33.) Here the abacus



shows itself only in front at *f f*, over the two voluted faces, the rest being concealed by the baluster sides *b b* of the capital, which extend beyond the abacus, and convert the general plan into more than a square. Although the channels and other details of the baluster sides are omitted, and only their general shape shown, the engraving explains how those sides are *reduced* (p. 34) by being hollowed out or curved concavely on the plan.

In the next, or Corinthian Order, a similar curvature is given to the



abacus itself on all its four sides; the capital of this Third Order having that in common with the First one, that it is quite regular. One great point of difference between the Doric and Corinthian abacus is, that in the former the angles are unsupported, and overhang the circular body of the capital, while in the Corinthian they are extended

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outwards diagonally, as *aaaa* in the figure, and supported by the *caulicoli* or small volutes, which they in turn serve to cover. The letters *ffff* indicate the rosettes or flowers on the four faces of the abacus.

There is an example in the Vatican of an antique Corinthian capital, with a *square* abacus, whose sides are merely recessed or hollowed out concavely.

ÆSTHETICS—ÆSTHETIC.—A modern architectural writer condemns these terms as 'silly and pedantic' ones that have 'lately come into use in the Arts,' and as 'useless additions to the nomenclature' and language of art-criticism. In what respect 'Æsthetics' is at all more pedantic than 'Optics,' 'Mathematics,' 'Physics,' and other words of a similar class now familiar to English ears,—although they are all of them essentially Greek,—or more pedantic than a great many architectural terms which are not only Greek but altogether technical, it is not easy to divine; while as to silliness, there seems to be far greater silliness in rejecting, or objecting to, than in adopting terms which are not only highly expressive and convenient, but have found their way into every European language, from that of Russia to that of Spain.

The term Æsthetics implies the perception and the study of those qualities which constitute the beautiful and artistic, and form the finer essence of all productions of Fine Art. It carries with it, therefore, a more exact and philosophic meaning than the word Taste. In its adjective form, in which it more frequently occurs, it is particularly useful, as no adequate epithet can be substituted for 'Æsthetic.' Thus we speak of the 'æsthetic sense,' of 'æsthetic feeling,' or 'study,' or 'principles,' &c.; but we cannot say the 'tasteful sense,' or 'tasteful study.' As to the species of study just alluded to, no term may be required to designate it, because study of the kind is generally dispensed with for Architecture, an historical and technical knowledge of it being deemed sufficient, without any acquaintance with those comprehensive *æsthetic* principles of the Art which can guide us where technical rules stop short, and mere rules abandon us to error or to doubt.

ANTÆ, Doric, 22.

———, Ionic, 41.

ANTEFIXÆ.—Called by some *Greek Tiles*,—upright ornamental blocks placed at intervals on the cornice along the side of a roof, to conceal or rather terminate the ridges formed by the overlapping of the roof tiles.

ANTHROPOMORPHIC.—From the Greek ἄνθρωπος (anthropos), a man or

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human being, and μορφὴ (morphé), form:—shaped like or bearing the semblance of a human figure. See p. 87.

ANTHROPOSTYLE.—From ἄνθρωπος and στύλος (stylos) a column; an anthropomorphic pillar. See p. 87.

ARAEOSTYLE.—The widest mode of intercolumniation, 83.

ASTRAGAL.—A small convex moulding. The term is applied chiefly to that which is employed to separate the capital from the shaft of a column.

ASTYLAR.—From the Greek privative α, and στύλος (stylos), a column: columnless or without columns, a term that expresses the absence of columns or pilasters, where they might else be supposed to occur.

ATLANTES.—The kind of figures or statue-pillars so called, 88.

ATTIC.—This is usually defined to be a small Order placed over a principal one; from which it might be supposed that it differed from the Orders in general chiefly by being applied on a smaller scale; instead of which it has nothing of columniation and trabeation in it. There is far greater analogy between an attic and a stylobate, or continuous pedestal, both of them consisting of base, a dado or die, and a simple cornice, and the difference between them consisting chiefly in their application, the stylobate being below, and the attic above the Order. Attics are either plain or pilastered accordingly as the building itself is astylar or the contrary; but what are called attic pilasters are no more than slight *breaks* or projections on the general surface, with the mouldings above and below breaking round them, without any sort of capital, but just after the manner of pedestals: their faces, however, are sometimes distinguished from the intermediate surfaces by being panelled and otherwise enriched, as is done, for instance, in the façade of the new Treasury Buildings: another mode of decoration is to place either a statue, or else a caryatid figure, before each break in the front of the Attic, an example of which occurs in the Strand front of Somerset House. When introduced only over particular portions of a façade, such as the centre or extremities, the Attic is an exceedingly useful element in composition, inasmuch as it serves not only to give such parts greater importance, but also to produce play of outline or sky-line; whereas, if continued throughout, it is apt to produce heaviness as well as monotony, and some degree of feebleness of expression also, its cornice forming, in comparison with the principal cornice below, but a very insignificant finish to the general structure.

AXIS.—An imaginary line through the centre of a column, &c., or its geometrical representation. Where different members are placed over each other, so that the same vertical line on the elevation

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divides them equally, they are said to be on the same axis, although they may be on different planes. Thus, triglyphs and modillions are so arranged that one coincides with the axis or line of axis of each column. In like manner, the windows or other openings in the several stories of a façade must all be in the same respective axis, whether they are all of the same breadth or not.

BALUSTER side of Ionic capital, 33.

BASES, remarks on, 109.

BED-MOULDINGS.—This may be understood as a collective term for all the mouldings beneath the corona or principal projecting member of a cornice, which, without bed-mouldings, would appear too much like a mere shelf.

BIRD'S-BEAK MOULDING, 23.

BUCKINGHAM PALACE, 86.

CABLED fluting, 62.

CAPITAL.—The capitals of the columns constitute the principal and most obvious indicial mark of the respective Orders. For those of each of the Three Classes or Orders a certain character conformably with the rest of the Order is to be observed; but that attended to, further restriction is unnecessary. Between several examples, all decidedly referable to one and the same Order, very great special differences occur, and there might easily be a very great many more. Although the capital itself is indispensable, it is so only *esthetically*, and not out of positive necessity. The necessity is only artistic: decoration of the kind there must be, but the express mode of it is one of those matters which should be left to design, to which it properly belongs. Capitals are just as legitimate subjects for the exercise of taste and invention as anything else in decorative design. The capital is only an ornamental head to the column, and therefore admits of being as freely designed as any other piece of ornament, on the conditions of its being accordant in character with the rest of the Order, and of forming an agreeable transition from the shaft of the column to the architrave.

CARYATIDES.—Anthropostylar pillars or human figures (usually female ones) employed instead of columns to support an entablature. Such figures ought always to be perfectly free from all *attitudinizing*, and to appear to support their burden without any effort. Some very matter-of-fact critics object to caryatides as being at the best only beautiful absurdities; as if statues so applied were particularly liable to be mistaken for living persons subjected to a more severe

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punishment than that of being posted up in a niche, or on the top of a building. See also p. 89.

COLONNADING, remarks on, and the effect attending, explained, 116.

COLUMNAR-ARCADING, 116, *note*.

COLUMNIATION, remarks on, 71.

CORINTHIAN, or Third Order, 55; Lysicrates example, 57; Tivoli, 66; 'Composite,' or Ionico-Corinthian, 65.

CORNICE.—Doric, 21; Ionic, 44; Corinthian, 64.

CORONA.—That part or member of a cornice which projects out over and protects the bed-mouldings (see *Bed-mouldings*), and throws off the rain from the rest of the entablature.

CYMATIUM.—A moulding whose section or profile is convex below and concave above. See *Mouldings*.

DADO.—The general plane surface of a pedestal or stylobate between the upper and lower mouldings.

DENTELS.—The series of small upright blocks introduced among the bed-mouldings of a cornice. They are supposed to be peculiarly characteristic of the Ionic cornice, but are also employed for the Corinthian one, beneath the modillions, which latter are the principal characteristic of the Corinthian cornice, as dentels alone of the Ionic.

DIAMETER.—The lower diameter of the column is taken as the *proportional* measure for all the other parts and members of an Order, for which purpose it is subdivided into 60 parts, called minutes, or into two *modules* of 30 minutes each; but the module is quite an unnecessary distinction, not being, like the diameter, the constant measure of any one member of the Order, and the use of it merely adding to the terms of computation. It is surely much more simple and convenient to write 1·40′, meaning 1 diameter and 40 minutes, than 1d. 1m. 10′. Being proportional measures, diameters and minutes are not fixed ones, like feet and inches, but are variable as to the actual dimensions which they express—larger or smaller, according to the actual size of the diameter of the column. For instance, if the diameter be just 5 feet, a minute, being $\frac{1}{60}$, will be exactly 1 inch; if $2\frac{1}{2}$ feet, the minute will be half an inch; or if the diameter be only one foot, the minute is $\frac{1}{60}$ of a foot, or $\frac{1}{5}$ of an inch.

DIE.—See *Dado*.

DIMENSIONS.—In architectural description, some positive dimensions or approximation to them should always be stated. Such mere epithets as *large*, *lofty*, *spacious*, &c., mean nothing,—convey only an exceedingly vague, general idea according to the particular notions of

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those who employ them; and, like all epithets, they are liable to the most shameful abuse.

Echinus.—A large convex moulding, generally of elliptical or eccentric contour in the Greek style, and forming the quarter of a circle in the Roman. The echinus is the indicial mark of and constitutes the principal portion of the Doric capital, the other being the abacus; at least the term echinus is applied especially to that member of the capital, although in many Greek examples its profile has scarcely any convexity, but more resembles a portion of an inverted cone (18). In Roman and Modern Architecture the echinus is usually called the *ovolo*. See *Mouldings*.

Elevation may be defined to be the *upright plan* of a building, or any part of a building, showing its exact form and dimensions as they actually exist; whereas in perspective the forms are shown not as they exist, or are in themselves, but merely as they appear to the eye, according to the station of the spectator. Elevations are of two kinds, viz. *geometrical* and *perspective*. In the former, the whole is projected upon the same *plane*, the remote parts are shown of their full size, and distance can be expressed only by shadow thrown upon the second plane by parts in the nearest one; whereas Perspective elevation partakes of parallel perspective, and the parts beyond the first plane are shown diminished by distance, and also come into view, although they may be behind others on the first plane, by which they would be concealed in a geometrical representation. For instance, supposing a portico to have a second row of columns in the same axes as those in front, that circumstance would not be at all apparent in a geometrical elevation, but could be understood only by means of the plan, the inner columns being concealed by those before them; but in a perspective elevation they would show themselves, as would also the ceiling and floor.

Entablature.—The horizontal portion of an Order; the *trabeation* or system of beams supported by the columns. There may, however, be entablature without columns,—where the latter are suppressed, as on the flanks of an *apteral* temple; or omitted entirely, as in *astylar* building. For the entablatures of the respective Orders, see pages 18, 42, 63.

Entasis.—A slightly convex curvature given in execution to the outline of the shaft of a column, just sufficient to counteract and correct the appearance, or fancied appearance, of curvature in a contrary direction (*i. e.* concavely), which might else take place and cause the middle of the shaft to appear thinner than it really is. Entasis is there-

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fore nothing *positive:* it is not intended to show itself, for were it to do so,—were there to be any visible swelling,—it would be a deformity; yet such deformity has been studiously adopted by many Modern Architects, merely, it would seem, for the sake of making evident that at all events they took pains to guard against an imaginary defect. The subject of entasis has been made one of those *nugæ difficiles* which those who can do nothing else make great parade with. To such, then, be left all such sublimated transcendental niceties. If a column only 30 or 40 feet high would appear thinner in the middle than it really is, unless there made somewhat thicker than it would be were its profile a straight line, the same appearance would take place in any other lofty object, and in a greater degree in proportion to actual height; so that a tower of great loftiness, both positively and proportionally, *ought*—unless entasis were given it, to look thinner in the middle than at top and bottom. If such appearance really does take place, it is one perfectly in accordance with the laws of vision, therefore no more than a natural and perfectly proper one. In all such cases the judgment corrects the eye, and prevents mistakes. It would, in fact, require a very great stretch of imagination to fancy what we know to be straight, and of the same breadth throughout, is not so: if we can fancy that, we can also fancy that the further end of a building is not so high as the nearer one, and that instead of being horizontal, the cornices slope downwards. So much for the fuss made about entasis, including that about the hypothetical curvature in the horizontal lines of the Parthenon, where curvature was administered, if administered at all, in an exceedingly homœopathic ratio.

EPISTYLIUM.—The architrave or horizontal course resting immediately upon the columns. Hence we should denote as *Epistylar Arcuation* that system in which columns support arches instead of horizontal architraves and entablatures. See p. 79.

EPITITHEDAS.—A term applied by some writers, by way of distinction, to the cymatium on the sloping or *raking* cornices of a pediment, which *superimposed* moulding (as its name implies) was frequently largely developed, and enriched with an ornamental pattern.

FENESTRATION, termed by the Germans *Fenster-architektur*, is, in contradistinction from columniation, the system of construction and mode of design marked by windows. Fenestration and Columniation are so far antagonistic and irreconcileable, that fenestration either interferes with the effect aimed at by columniation with insulated columns, as in a portico or colonnade, or reduces it, as is the case with an engaged

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Order, to something quite secondary and merely decorative. Astylar and Fenestrated ought, therefore, to be merely convertible terms; but as they are not, we may be allowed to invent that of *columnar-fenestrated*, to denote that mode of composition which unites fenestration with the *semblance*, at least, of the other. Employed as a collective term, Fenestration serves to express the character of a building or design with regard to the windows generally: thus we say, the Fenestration is excellent, or the contrary,—ornate or meagre,—well arranged or too crowded,—which last circumstance is a very common fault, and is destructive both of grandeur and of repose. *Si quæris exemplum, circumspice.*

FERGUSSON, MR., his hypothesis as to the prototype or germ of the Ionic capital, 97.

FILLET.—Any narrow flat moulding or surface is so termed. Fillets are used either to separate or finish other mouldings. The intervals or spaces between the flutes on the shaft of a column are also called fillets, although not actual members, but merely the surface left between the hollowed channels or flutes themselves.

FLUTING.—The collective term for the channels cut on the shafts of columns. Hitherto this has been restricted to little more than two modes, viz. with arrises or sharp ridges, as in the Doric Order (p. 17), or with fillets. A different mode of *striating* the shafts of columns is described at page 40, and many others might easily be devised. Although, as remarked at p. 23, the Greeks did not flute their *antæ*, there may in some cases be adequate reason for fluting *pilasters*, provided they are not Doric ones, and that even though the columns should be unfluted; because such channelling serves to distinguish their shafts from the face of the wall to which they are attached. On the other hand, so far from enhancing effect, fluting impairs it, if the shafts of columns or pilasters are of coloured marble; inasmuch as, instead of producing greater richness, it occasions confusedness, and interferes with the beauty of the material itself.

FRIEZE.—The middle one of the three divisions of an entablature. It derives its name from the Italian *Fregio*, ornament, as being that part of the entablature especially appropriate for sculptural embellishment, yet, in contradiction to such signification, the frieze is all but invariably made a mere plain surface by Modern Architects; except the Order employed happens to be Doric, and then triglyphs are introduced as matter of course, but the metopes left blank, even though ornateness is studied in other respects, and in parts not comprehended in the Order itself. For the Ionic Order, Modern Architects have sometimes employed the so-called *pulvinated* frieze (p. 52),

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that is, one whose face is curved convexly; but upon what principle they have appropriated such form of the frieze to that Order in particular, when it is just as suitable for the Corinthian, is not said, and not to be guessed.

Gusto.—Although in its literal meaning *Gusto* corresponds to our English word Taste, the two terms are so far from being exactly synonymous, that the distinction to be observed between them is rather an important one. Whereas Taste refers to the passive perception of æsthetic beauty, Gusto refers to the *relish* on the part of the artist himself which his productions manifest. Taste may be displayed without Gusto; and Gusto without Taste. For instance, both Rembrandt and Hogarth showed infinitely more gusto than taste, as did likewise Vanbrugh. Gusto implies the manifestation in the work itself of earnest relish for it, together with a certain raciness of quality which cannot possibly be got at second-hand.

Guttæ, Doric, 19.

Hermes.—The distinctive term applied to a pillar or rather a *stele*, or square shaft terminating in a bust. See p. 90.

Hypæthral (literally, 'under the sky').—A descriptive epithet applied to such temples as were, or are supposed to have been, partially open to the sky, within their *cella*.

Hypotrachelium.—The necking of a capital introduced between the capital itself and the shaft of the column. In the Grecian Doric, the hypotrachelium is little more than nominal, being marked only by one or more horizontal channels or incisions, and the flutings continued through them; whereas to the Modern Doric capital a distinct necking is given by the astragal which separates the capital from the shaft, and marks its commencement. But that is considered an essential part of the capital, and as to the Corinthian capital it does not admit of any necking: wherefore the Ionic one possesses a great advantage over either of them, inasmuch as it may have a distinct necking or not, and it may be either plain or enriched.

In Antis, the term explained, 72.

Intercolumn and Intercolumniation.—The subject of Intercolumniation is treated of at page 81, &c. These two terms are generally confounded together; or rather, the second is very improperly substituted for the other, contrary to all analogy of language and distinctness of meaning. Having only a general collective import, *Intercolumniation* can, like *Columniation*, be used only in the singular.

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We may say of a portico, &c., that its intercolumniation is good or poor, close or straggling, but not that it consists of so many intercolumniations (according as the number may be), since such mode of expression is no better than a solecistical vulgarism. We might just as well describe a tetrastyle portico as having four *columniations*, as say that it has three *intercolumniations*.

IONIC ORDER, 31.

———— Ruskin's newly-invented extinguisher for it, 93.

JONES, INIGO, his 'anthropostylar' court, for Whitehall Palace, 89.
JOVELLANOS, remark by, 119.

LOFTINESS, or Proportional Height. See page 75.
'LYSICRATES' CAPITAL, 57.

METOPE.—The spaces between the triglyphs of the Doric frieze, which in the Parthenon, for instance, were filled in with sculpture; but in modern porticoes that pique themselves upon being *after the Parthenon*, they are mere blanks.

MINUTE.—The sixtieth part of the diameter of the column as a proportional measure. Minutes are written thus, 10′, *i. e.* ten minutes.

MODILLION.—The small bracket-shaped members or ornaments in the Corinthian cornice are termed *modillions*. See page 64.

MODULE.—The semi-diameter of the column, or 30 minutes. See *Diameter*.

MONOPROSTYLE explained, 73, *note*.

MONOTRIGLYPHIC.—That mode of intercolumniation in the Doric Order according to which there is only a single triglyph over each intercolumn, 20.

MOULDINGS.—The principal mouldings and the difference of their profiles in the Grecian and Roman styles are exhibited in the following page.

MUTULES.—The small blocks or plates attached to the soffit of the corona in the Doric cornice, 21.

NECKING.—See *Hypotrachelium*.
NEW ORDER, the possibility of one, considered, 100.
NOTATION, architectural, specimen of, page 75. *note*.

ORDER, possibility of a new one, considered, 100.
OVOLO.—See *Echinus*.

PEDESTAL.—No constituent or essential part of an Order or a column, but merely a casual addition to it, 7.

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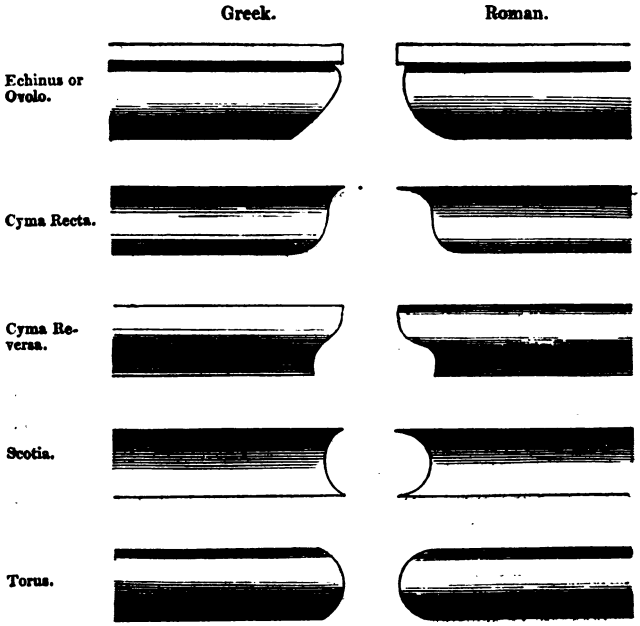

PEDIMENT answers to the Gable in Gothic Architecture, &c., it being the vertical triangular plane at the end of a roof which slopes downwards on each side from its ridge. The Pediment differs from the Gable in having a *tympanum*, or clearly defined triangular surface with a horizontal cornice below and two sloping or raking cornices. See page 24.

PERSPECTIVE effect, value of, in architecture, 116.

PICTURESQUE, Ruskin's strange definition of, 117, *note;* why colonnading contributes to picturesque effect, 116.

PILASTER.—Unknown to Greek Architecture, in which only antæ (see *Antæ*) were admitted: Pilasters are employed by the Moderns as substitutes for an Order in engaged columns, and are, perhaps, even preferable to the latter, inasmuch as they combine better and more naturally with the wall to which they are attached.

PLAN.—A plan may be familiarly described as an architectural *map*, or map of a building: therefore only those who cannot comprehend a geographical or topographical map—a degree of obtuseness hardly

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credible—can be at any loss to understand an architectural one, the latter being precisely of the same nature as the others, with this difference in its favour, that it is much less conventional. To define it more exactly,—a plan is a *horizontal section* supposed to be taken on the level of the floor through the solid parts of the fabric—walls, columns, &c., so as to show their various thicknesses and situations, the dimensions of the several spaces or rooms, the position of the doors by which they communicate with each other, and various particulars that cannot otherwise be explained. Studying buildings without plans is like studying geography without maps. Nevertheless, most persons ignore—affect a genteel ignorance of such vulgar and technical drawings as plans. Plan frequently costs the Architect more study than all the rest of his design. Very much mistaken are they who suppose that convenience alone has chiefly to be considered. Convenience is, of course, or ought to be made a *sine qua non*; yet it is not so much a positive merit in itself, as the want of it is a positive defect. Mere convenience is not an artistic quality: from that to beauty of plan,—to striking combinations, and studied effects, and varied play of arrangement, the distance is very great. A common-place plan is but a very dull uninteresting affair. It is no more than what any builder can accomplish; but a plan replete with artistic combinations, piquant play, and well-imagined contrasts, is no every-day matter.

PODIUM.—A continued pedestal; a dwarf pedestal wall; a closed parapet employed instead of an open balustrade.

POLYSTYLE.—Having a number of columns. Where columns occur behind columns, as where a portico has inner columns, like that of the Royal Exchange, such portico may be termed *polystyle*.

PORCH.—Any small portico considerably lower than the main structure to which it is attached may be so termed, in contradistinction to one carried up the height of the building, or as high as the principal cornice.

PORTICO.—For the different plans and denominations of porticoes, see p. 72.

PRECEDENT, how far to be deferred to, 113.

PROFILE.—The outline of a series of mouldings, or of any other parts, as shown by a section through them.

PROPORTION.—The magnitude of one part as compared with some other, without regard to actual size, consequently not to be confounded with 'dimension;' for columns widely different as to size may be similarly proportioned, and *vice versâ*. The term 'proportion' is used absolutely in the sense of 'good proportion;' although every thing that

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has shape has proportions of some kind or other. The subject of Proportions has been greatly mystified by writers who have laid down certain fixed proportions as the best of all for every occasion alike, and as the *ne plus ultra* of artistic taste. But fixed proportions can be followed mechanically by every one alike; whereas it requires ability to deviate successfully from routine measurement, and apply the *poco piu* or the *poco meno* as the particular occasion or the particular effect aimed at may require—at least justify. It is the eye that takes cognizance of proportions; and the Architect's own eye ought to be quite as correct as that of other people.

PROSTYLE.—A portico which projects from the body of a building, or the rest of a façade. See p. 72.

PULVINATED.—A frieze whose face is convex instead of plane is said to be *pulvinated*, from its supposed resemblance to the side of a cushion, which swells out when pressed upon. See p. 52.

RAKING CORNICES.—A term, rather unmeaning in itself, applied to the inclined cornices on the sloping sides of a pediment.

ROMAN ARCHITECTURE, remarks on, 76.

RUSKIN, the Ionic 'extinguisher,' his curious doctrine concerning the Orders, 93.

———, his queer definition of the Picturesque, 117, *note*.

RUSTICATION.—Although Rustication is not spoken of in this treatise, the term is here inserted for the purpose of remarking that what is so called might frequently be more correctly described as *Decorative Masonry*, since, so far from expressing rudeness or coarseness, it may be made to display the most studied nicety and elaborate finish. Rustication, no doubt, originated in a very rude mode of construction; but what was at first clumsiness and irregularity, was afterwards refined into an artful and symmetrical disposition of the stones and courses of masonry, by a similar æsthetic process to that which converted the original amorphous stone pillar into the Doric column. To call such masonry, as some have done, only *cicatrizing* and *gashing*, betrays a loss for both arguments and words. Decorative masonry is most assuredly not according to Greek taste or practice; for the Greeks affected to suppress the appearance of *articulation* in masonry, and thereby to give their buildings, as far as possible, the look of not being *fabricated*, but *carved* out of one block of solid material. Yet it does not therefore follow that the other mode of decidedly articulating and pronouncing the joints and courses of the stones is bad, because it is an opposite one. So far from being unæsthetic, it pos-

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sesses much that recommends it artistically, for it gives *colour*, and produces richness of surface where there would else be blankness. A wall whose face is so decorated forms an admirable ground to columns or pilasters, which it serves to relieve very effectively, as is exemplified in the screen façade of Dover House, that little architectural gem by Holland, which, though by no means faultless, has more of genuine artistic quality than any other building of its time in the whole Metropolis.

SCOTIA.—From the Greek *σκοτία* (skotia), darkness: the large hollow or concave surface in the base of a column. The scotia and tori mutually set off each other, and produce a piquant antithesis as regards light and shade as well as profile or outline.

SECTION.—A vertical plan of the interior of a building, showing it as it would appear upon an upright plane *cutting through it*. Though rarely shown, sections are almost as indispensable as plans, like which, they show the thicknesses of the walls; and in addition those of the ceilings and floors; and show also *heights*, both of the rooms themselves, and of doors and windows;—moreover, the forms of the ceilings, whether flat, or coved, or vaulted. In one respect, too, a section partakes of the nature of an elevation, the plane parallel to the line of section being an elevation of the interior, or rather consisting of as many elevations as there are separate rooms or divisions. Sections may be described as either *furnished* or *unfurnished*; the former show only construction and the strictly architectural parts, wherefore, if the side of a room happens to be quite plain, without door, chimney-piece, or other feature, that side or space will be a blank, or little better. Furnished sections, on the contrary, exhibit, besides what strictly belongs to the Architecture and its decoration, mirrors, pictures, statues, furniture, draperies, and all other accessories. The number of sections required depends upon the nature of the plan, and what there is worth showing. If the design be worthy of it, there should be as many sections as will suffice to show every side of every principal apartment; though it may not be necessary to repeat the entire section through every floor. Sections are the *deliciæ* of architectural illustration, and, it would seem, far too precious to be frequently exhibited.

SHAFTS of columns, modes of decorating, 110.

SOFFIT.—From the Italian *soffitto*, a ceiling; the under surface of any projecting moulding or member.

STATUES, remarks as to the disposing them in architectural composition, 90.

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STYLE, what ought now to be adopted as a general and fundamental style, 119.

———, in the sense of a column (from the Greek *στύλος*, a column), enters into a great number of useful compound terms referring to matters connected with columniation, and which may here be grouped together, so that any word ending in 'style' may be found here, though passed over in its alphabetical order. The number of columns in the front of a pedimented portico is briefly expressed at once by any of the following terms:

Distyle in antis, two columns and two antæ.
Tetrastyle „ four columns.
Hexastyle „ six „
Octastyle „ eight „
Decastyle „ ten „ almost the greatest number that can be placed beneath a pediment.

As regards Intercolumniation, we have—Pycnostyle—Eustyle—Aræostyle, 79.

The terms descriptive of the plans and columniation of ancient temples are—Prostyle—Amphiprostyle—Peristyle, 69.

Also,

Monoprostyle, a prostyle with *one* intercolumn on its flanks.
Diprostyle „ „ *two* „ „
Triprostyle „ „ *three* „ „

To which may be added—

Heterostyle, composed of different Orders, as where one Order is employed for the centre of a composition, and another for the wings.

Macrostyle denotes a large Order, that is, one forming the height of the building.

Microstyle, on the contrary, denotes a lesser Order, belonging only to some low division of the building, as for instance a porch. Thus porticoes are *macrostylar*, porches *microstylar*. In Italian composition, microstylar doors and windows, *i. e.* doors and windows decorated with small columns, are of frequent occurrence.

STYLOBATE.—That part of a structure on which an Order is raised, and on which the columns immediately stand. The term is, however, restricted to what partakes of the character of a pedestal, and not to a mere plinth or socle on the one hand, or to a lower fenestrated floor on the other.

SUPERCOLUMNIATION, or the placing one tier of columns over another, 84.

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TELAMONES, the anthropomorphic pillars, so called, 88.

TERMINUS, the kind of figure so called, 9, 89.

TORUS, a large convex moulding or *coil* in the base of a column.

TRABEATION explained, page 80.

TUSCAN, the Order so called, 29.

TRIGLYPHS,—literally, "three-channelled" (see page 19),—the upright blocks or tablets peculiar to the Doric frieze.

TYMPANUM.—The general surface of a pediment or space enclosed by the horizontal and raking cornices, and which, if owing to its situation well fitted for the display of sculpture, is, in consequence of its shape, rather the contrary: see page 25. It would therefore, perhaps, be better to confine statuary to a single group of figures in the centre, either leaving the rest of the tympanum plain, or employing some other mode of decoration for it, as might in some cases be done for the entire surface. The head of an arch or arcade over a door or other aperture is also termed a tympanum.

VOLUTE.—The characteristic ornaments and indicial marks of the Ionic capital formed by circumvolving spiral mouldings are termed volutes. The small circle in which the spirals terminate is called the *eye* of the volute.

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PREFACE TO THE FIRST EDITION.

THERE is, perhaps, no art or science which possesses more extensive or prolific means of instruction and entertainment, or which has greater claims on the consideration of the world at large, than that of Architecture. To consider properly and appreciate fully the importance of the art, we must first take its history from the earliest period, wherein we shall find that every invention has had its origin in the wants of man, and every improvement in the science of building has resulted from the requirements of various nations advancing towards a more powerful position or a higher degree of civilization.

The architecture of a country is therefore inseparable from its history; it is the external and enduring form of a people's habit — an index of their state of knowledge and social progress. But it may safely be asserted, that to the influence of religious systems is mainly to be attributed the advances and perfection in the arts of design and decoration, as well as their perpetuity to veneration for the purposes of their erection.

The present small work on the History of Architecture is intended to serve as an introduction to the study of the art,— to assist the student in the distinction and classification of the various styles which have been practised in different countries, —and to point out their derivation or application. In some

instances, for want of positive evidence, conclusions are formed from similarities of combinations or comparative history, but avoiding all reference to speculative theories. The origin of Grecian architecture is, and always has been, a *vexata quæstio:* whether the forms of the temples built in durable materials were derived from the timber erections of their own country, or from the stone temples of Egypt, is difficult to determine; but we know that from the earliest period there was a connection and intercourse carried on between the two nations; and as the climate of Egypt was not favourable for the growth of timber, we are certain that no country was called upon earlier to adopt stone or granite as a building material. Thus there is every probability that the architecture of the Greeks was formed on those pre-existent structural buildings of the Egyptians having columns and entablatures, and which had no relation to a wooden edifice. To the dissimilarities of the constituent principles of sculpture, or the general properties of moulding and ornament, no importance can be attached in deciding the origin of any style; for we know that the essential elements of a class of architecture may be borrowed by men of a different property of mind, who may have the power of adopting and improving what others have invented so as to make the invention their own, and produce so great a difference that it is scarcely possible to discover the growth of one style of architecture from another. To instance this, we need not go beyond our own country,—where, in five centuries, the same race of men produced varieties of design much more antagonistic to each other than those of Egypt and Greece.

It has been the main object in the following treatise, to give a continuous history of architecture, from the time of its perfection in Greece to the present period, describing its various peculiarities and gradual transitions from one style to another; and it is to be regretted, that the comparatively restricted space has necessitated an undue compression of the vast mass of information connected with this subject, and to which circumstance some omissions may be attributed. It is, however,

to be hoped that this Introduction to the Art of Architecture, divested of unnecessary technicalities, may be instrumental in producing a more general appreciation of its beauties, and be the means of leading the general reader to more extensive researches.

T. TALBOT BURY.

26, Golden Square, June, 1849.

IN producing a second edition of Mr. BURY'S Treatise on the History of Architecture, which has been demanded by the sale of an extensive impression since its publication in 1849, it has been deemed advisable to make some considerable additions to the number of its illustrations: engravings of several of the most interesting examples of the various styles of architecture which prevailed at different periods are therefore inserted, with a view to enhance the intrinsic merits of the work.

An APPENDIX, containing some additional remarks on the churches of Wren, Hawksmoor, Gibbs, and others, is also added.

J. W.

April, 1853.

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RUDIMENTARY ARCHITECTURE.

CHAPTER I.

ARCHITECTURE OF VARIOUS COUNTRIES.

In an attempt to trace the origin of Architecture, with a view to a history of the Styles that prevailed in this and other countries, it will be quite unnecessary to give any account of the different kinds of tents, huts, and other timber erections used as the early habitations of mankind, resulting from the necessity of protection from the inclemency of the seasons, and which required little skill or knowledge of construction. Our purpose is to refer only to such ancient erections of durable materials as evince a knowledge of some systematic construction, or were the source from which proceeded all that properly can be called Architecture.

NINEVEH, BABYLON, AND EGYPT.

The first city that contained solid and durable edifices was Nineveh, the capital of the Assyrian empire and the residence of the Assyrian kings, founded by Asshur, the great-grandson of Noah.* Jonah speaks of it as "an exceeding great city of three days' journey:" † it is described by Strabo as larger than Babylon: the walls, according to Diodorus, were 100 feet high, and so broad that three chariots might be driven on them abreast: upon the walls stood 1500 towers, each 200 feet in height; and the whole was so strong as to be deemed impregnable. That this city must have been one of great gran-

* Genesis x. 11. "Out of that land went forth Asshur, and builded Nineveh."

† Chap. iii. 3.

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deur at a very early period, there can be little doubt. It is mentioned as a place of great commercial importance, and "its merchants as more than the stars of heaven." Nineveh was taken by the Medes under Arbaces, in the eighth century B. C., when it was nearly destroyed; and quite so, when taken by Cyaxares, 625 B. C. All that now remains, on each side of the Tigris, of this once splendid city, has the appearance of a range of hills, from which large stones and bricks connected by bitumen, on which are inscriptions, are frequently dug up.

The next city noted for its early origin was Babylon, founded by Nimrod, son of Cush, and grandson of Ham.* It is described by the ancient writers, Strabo and Quintus Curtius, as a city of great strength and magnificence: so great was the circuit of its walls, that there was pasture and arable land within them sufficient to support the whole population during a long siege. According to Herodotus, the walls were 50 cubits thick and 200 in height, built of bricks made from the earth which was dug out of the ditch that surrounded the city. In the walls were 100 gates made of brass, as well as the jambs and lintels. It has been said, that if ever there was a city which seemed to bid defiance to any predictions of its fall, that city was Babylon,—for a long time the most famous city of the old world, whose walls were reckoned amongst its wonders.

The ruins that have been discovered on each side of the Euphrates confirm the accounts which have descended to us of its splendour; although nothing now remains but large masses of brick-work laid on lime mortar of good quality. On the eastern side, it is supposed, are the remains of the great temple of Belus,† which, according to Diodorus, was higher than the largest pyramid. Among the ruins are to be found

* Genesis x. 10. "And the beginning of his kingdom was Babel."

† The temple of Belus, as described by Herodotus, was of a pyramidal form, similar to the Hindoo temple at Tanjore, and the great Mexican temples. It was founded by Semiramis, 1650 B. C.

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fragments of alabaster vessels, fine earthenware, marble, and great quantities of varnished tiles whose glazing and colouring are still fresh.

Of what date these are it is impossible to conjecture, as so little information exists on this interesting subject. We are told that in the time of Semiramis, Queen of Assyria 1665 B. C., an extensive and splendid palace existed on each side of the Euphrates, connected by a tunnel under the river, and likewise that a bridge was built by Nitocris to connect the two parts of the city divided by the Euphrates. The piers were of large hewn stones, in order to erect which the course of the river was diverted, and its bed left dry.

The city was brought to its highest degree of perfection by Nebuchadnezzar, about 600 years before the Christian era; but its splendour must have been of short duration, as about 60 years after the death of that monarch, and during the reign of Belshazzar, it was taken by Cyrus. From that time it gradually declined, and afterwards became a part of the great Persian monarchy.

The Egyptian Thebes,* situated near the southern extremity of that empire, is the most ancient city of whose buildings any remains exist at the present time. The period of its foundation ascends, probably, to the same antiquity as that of Nineveh and Babylon. It was the first seat of the Egyptian government,† which at an early period was transferred to Memphis, near the northern extremity of the empire. From this time its importance declined, but the imperishable nature of the materials and the immensity of its masses have preserved the buildings for more than three thousand years. Memphis, less fortunately situated, by being nearer the line of

* The most ancient name of Thebes is Pathros, and it was so called from Pathrusim, son of Mizraim and son of Ham. Mizraim was the first occupier of the country of Egypt.

† The first king mentioned is Menes, who is supposed to have lived above 2000 years B. C., and contemporary with the era of the Chinese emperor Gao, with whom the historical period of China begins.

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communication between Asia and Africa, has been more subject to the destructive caprices of man, and has disappeared from the face of the earth.* At present the site of the city of Thebes is occupied by four principal villages,—Luxor and Karnac on the eastern side, Gournah and Medinet-Abou on the western side of the river. The buildings and sculpture of this gigantic 'city of a hundred gates,' still extant, are the most ancient that exist in Egypt, and are the best and most genuine specimens of Egyptian art and architecture; for there is every reason to believe that by far the greater part were executed before Egypt had yet experienced the influence of the Greeks, and long before the Persian invasion.

The ruins, chiefly consisting of temples, colossi, sphinxes, and obelisks, occupy nearly the whole extent of the valley of the Nile, a space of six miles from east to west. On the western side, where the ruins of this vast city terminate, those of the City of the Dead commence, among which there are tombs excavated in the rocks, and decorated with paintings still as fresh as though the artist's hand had been engaged upon them but a few weeks past.

The principal remains of Egyptian architecture (chiefly temples) are to be found on the banks of the Nile, and extend from Cairo to Nubia, a distance of 500 miles. The peculiarity observable in all that was erected by the Egyptians is the great sublimity of the masses, the grandeur and severity of every line, by which their buildings bear the stamp of that sentiment of eternal duration which they were always so anxious to realize in their monuments.

At a very early period the Egyptians were extremely skilful in working stone, an art in which they have never been surpassed. The large blocks of stone of which their temples are composed are well squared, and so laid that the joints are scarcely visible.

The most interesting and complete temple in the whole

* Egypt was conquered by Cambyses, 525 years B. C.; after which time it became a province of Persia.

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valley of the Nile is that of Edfou, about 25 miles above Thebes. This great and magnificent temple is one of the largest in Egypt, and is in comparatively good preservation. Its form is rectangular, and its general dimensions 450 feet by 140 feet. In the centre of one of the sides is the entrance between two sloping towers, 100 feet in length by 32 feet in width, on the surface of which are represented some colossal figures; and above these are two rows of smaller ones, supposed to be the divinities of the temple receiving the offerings of the Ptolemies. Within is a court surrounded by a colonnade on three sides, and on the side facing the entrance is a beautiful pronaos, or portico, of eighteen columns: beyond this is another of smaller dimensions; and further on are the walls which protect the sanctuary and its dependencies: these are so completely filled up with sand and soil, that it is nearly impossible to reach them. All the columns, friezes, cornices, and the whole surface of the walls, inside as well as out, both of the pronaos and court, are covered with symbolical sculptures, hieroglyphical inscriptions, and representations of offerings to their divinities.

Of all the works of the ancient Egyptians, those which have caused the greatest wonder to the world at large are the Pyramids of Gizeh, supposed by Sir Gardner Wilkinson to have been erected 2120 years B. C.* Herodotus dates the Great Pyramid about 900 years B. C., or about 450 years before he visited Egypt. Chevalier Bunsen places them about 2000 years before that period; and this is confirmed by the opinions of Champollion and Rosellini.

The Great Pyramid, said to have been built by Cheops,† is 700 feet square at the base, and 470 feet in height; the second is 650 feet square, and 280 feet in height; the third, 400 feet square, and 160 feet in height. About 300 paces from the second pyramid stands the gigantic statue of the Sphinx, whose length, from the forepart to the tail, has been found to

* And attributed by him to Suphis and Sen-suphis.

† The other two by Cephrenes and Mycerinus.

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be 125 feet. Belzoni cleared away the sand, and found a temple between the legs, and another in one of its paws.

The mechanical skill of the Egyptians is shown in their quarrying and working stone; and the means that must have been used to convey such immense blocks of stone as we find in their works, from quarries situated at a distance from them, naturally surprise us.

The obelisks of Thebes and Heliopolis vary in size from 70 to 93 feet in length,* and are built of one stone. The largest in Egypt, which is at the great temple at Karnac, is calculated to weigh 297 tons, and was brought about 138 miles from the quarry. Those at Heliopolis passed over a space of 800 miles.

The two colossal statues in a sitting attitude (one of which is the vocal Memnon) are each of a single block, 47 feet in height, and contain 11,500 cubic feet; they are carved from stone not known within several days' journey from the place where the statues are found; and at Memnonium is a colossal statue, which, when entire, weighed 887 tons. The raising of the obelisks is considered a far greater test of mechanical skill than the transport of these prodigious weights; but into the mode that was adopted we have no insight from any representations yet discovered.

Of the taste, style, and character of Egyptian Architecture, little can be said, beyond admiration at the immensity of the works and the patience with which they must have been accomplished. The masses of material which the country produced measured their efforts and conceptions, and their invention was exhausted by a very restricted number of combinations.

Their monuments are admirable for grandeur and solidity, and they have a truly imposing effect; but we can only consider them as part of the history of Architecture and Art, because the ornaments and sculpture, originating from a

* Sir Gardner Wilkinson's 'Manners and Customs of the Ancient Egyptians.'

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symbolical religion peculiar to the Egyptians, admit of no revival, even were art more immediately connected with them.

The columns are evidently a representation of a bundle of reeds or lotus stems, tied together at the top and base, the leaves of which, as well as those of the palm, are chiefly used in ornamenting the capitals.

CHAPTER II.

GRECIAN ARCHITECTURE.

THAT Architecture and Art always have been progressive, and have not appeared at once in full perfection, is a truism that need scarcely be advanced; yet in our admiration of their perfection we do not always consider the history of their progression, or the sources from whence they sprang. No style, with the exception of the Egyptian, was the spontaneous growth of the soil on which it flourished, or proceeded directly from the nations that practised it: the germs of all other styles were borrowed from people whose habits and religious customs were totally dissimilar; and its advances or improvements were the natural results of civilization, caused by intercourse with other nations in times of peace, or by the adoption of all that was worthy of imitation in conquered states, during the incessant wars that were carried on in the eastern parts of the world.

Thus was it with the much admired Architecture and Arts of Greece and Rome, so that centuries elapsed ere anything worthy of those terms was to be found in either empire.

The most ancient writings and traditions inform us (and reason itself assists us to the same conclusion) that the various tribes of human beings diffused over the face of the earth led a wandering life until a period when, increasing in number and uniting together for mutual protection, they were obliged to surround their abodes by walls and fortifications, in order to secure themselves from hordes that lived by plunder only.

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Such was the origin of the earliest societies, and the foundation of the first towns and cities.

Greece was divided into a number of petty states, which, independent of each other, and therefore necessarily rivals, surrounded themselves, as a means of protection, with thick walls, long before they had learned the art of building temples, and when their huts or houses were of the rudest character. The first erections were their acropoles, invariably situated on eminences which were converted into citadels, and served for places of security when the population became too numerous to remain in them, and had spread themselves over the surrounding plains. The acropoles usually contained all things of the greatest value to the community, such as the public treasures, the archives, and the temples of the tutelary divinities; indeed, they were to the Greeks what the capitol was to the Romans.

The oldest remains of walls and acropoles exist at Tiryns or Tirynthus and Mycenæ, near Argos, in the Morea, and are said to have been built by the Cyclopes, a tribe which is supposed to have arrived from Thrace or Phœnicia, and settled in Asia Minor. The date of the masonry is supposed to be coeval with the time of Abraham, who arrived in Canaan B.C. 1917.* Sir William Gell makes the date of the buildings B.C. 1379. All that at present exists of Tiryns consists of portions of the walls of the acropolis, which are from 21 to 25 feet in thickness, and 45 feet in height, built of tremendous blocks of stone from 10 to 13 feet long, and 4 feet 4 inches thick. In the thickness of these walls are two ranges of galleries, each 5 feet broad and about 12 feet high: the shape of these passages is triangular, the sides sloping upwards until they meet. This form was obtained by making the horizontal courses of masonry project one beyond the other, the edge of each course being splayed off so as to give, from the interior, very much the appearance of a kind of arch having been constructed. They probably conducted round the whole of the citadel, and were

* Fosbroke.

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used as shelters for the garrison during the night or bad weather. Mr. Woods* says that no tool seems to have been applied to the stone, but that the rude masses are merely heaped on one another, taking care in the position of each successive block to place it where it would most exactly fit into the work, and most probably keeping the smoothest side outwards to form the face of the work. The workmanship of these walls is nothing more than that of the modern fencing without mortar, the interstices between the larger stones being filled up with others of smaller size, unworked, and merely heaped on one another. Pausanias informs us, that when the Argives attempted to destroy Tiryns, the walls were so strong that they could not throw them down: he also describes them to be equally worthy of admiration with the Pyramids of Egypt.†

The next city connected with Greece that demands our notice, on account of its early fortifications and acropolis, of which parts exist at the present time, is Mycenæ, near Argos, likewise built by the Cyclopes, or by Mycenæus, B. C. 1700, and considerably enlarged by Perseus about B. C. 1390. The walls of this city, like those of Tiryns, are in some places built of rough stones, from 8 to 9 feet in length: when entire, they must have been 60 feet high, although at present, in the most perfect part, their height is only 43 feet. The general thickness is 21 feet, but in some places 25 feet, and they are mostly constructed of well-jointed polygonal stone. Some remains of towers are discernible.

One of the most interesting objects in the history of Art still remains here, generally known as 'the Gate of the Lions:' it is the principal entrance to the acropolis. This gate owes its celebrity to the basso-relievo by which it is surmounted,

* 'Letters on Architecture,' 2 vols. 4to.

† Sir William Gell states that on the centre of the architraves of the gates are holes, which leads him to suppose that the gates were hung from large central pivots, so that one side opened inwards while the other advanced.

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the subject of which is two lions, with their fore-paws resting on a pedestal: from this the gateway takes its name. This sculpture (on a triangular stone over the architrave) is the most ancient specimen of this kind of Grecian art; it is 10 feet 6 inches wide at the base, and 9 feet in height: between the lions is a semicircular pillar, bearing some resemblance to the Doric Order, although, contrary to the general usage, it increases in size from the bottom to the top. The date of this sculpture is supposed by some to be nearly coeval with the other part. Pausanias mentions, that in his day it was reported to be the work of the Cyclopes: however this may be, there can be little doubt but that it is the oldest specimen of Grecian sculpture now existing. The architrave over this gate is of one stone, 15 feet long, and 4 feet 4 inches in height, and in it are visible sockets of about 3 inches in diameter, which received the pivots upon which the gates turned.

We may here mention a subterranean building at Mycenæ, known as the Treasury of Atreus, the father of Agamemnon:* the principal chamber is of a circular form, 48 feet in diameter, and about 49 feet in height. The covering of this building has the appearance of the inside of a dome, which has led some authors to suppose that the arch was known in Greece at a very early period; but it is now ascertained that the principle of the arch does not exist in it, as the construction is the same as in the arched passages at Tiryns: the courses are horizontal, each projecting beyond the other, with the lower angles cut away until they meet at the apex, which consists of one very large stone. Beyond this is a vault or inner chamber, in the walls of which, as well as those of the larger chamber, are a number of bronze nails, which in all probability were used to fasten plates of metal to the walls; a custom doubtless resorted to on some occasions, as we read of "brazen chambers" and "brazen temples."† The courses of stone in this build-

* Atreus came to the throne of Argos 927 B. C.

† There are other instances of subterraneous chambers being lined with plates of metal: that at Argos, in which Acrisius confined his

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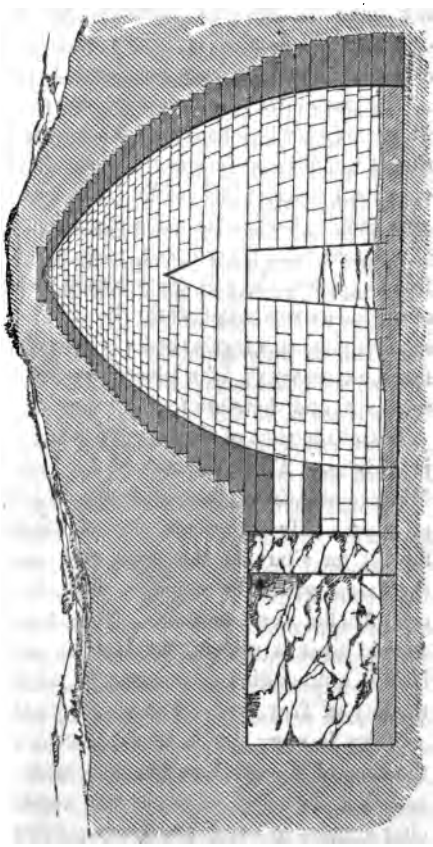
ing are regular, although of unequal size, and laid without cement: the lintel of the door is of one piece of stone, of about 27 feet long, 17 feet wide, and 3 feet 9 inches thick, and is calculated to weigh about 133 tons; a mass of stone to which none can be compared, excepting those used in Egypt.*



Having given a slight description of the earliest erections of stone in Greece, which are considered as specimens of Cyclopean or Pelasgic Architecture, we will now proceed to notice that style of Architecture which has with justice been deemed the purest that

daughter, was probably similar to those of the adjacent rival city.—*Vide* Donaldson's 'Description of the Subterranean Chamber at Mycenæ.'

* Mr. Donaldson states that "there are numerous buildings and excavations in Egypt, Sicily, and Italy, constructed in a manner similar to this subterraneous chamber. In the Memnonium at Thebes is an oblong chamber, covered by a semicircular vaulting, the stones of which have horizontal courses projecting beyond each other as they advance in height,

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the mind of man has invented, and to adorn which has originated a class of sculpture which, for composition and execution, has never been surpassed.

The accounts of the earliest temples of Greece or Asia Minor are chiefly founded on inferences, and so unsatisfactory that it would be useless to dwell on them at any length. The sacerdotal office, which at first was possessed by the head of each family, became in some countries, by the establishment of a monarchical government, vested in the prince; and where this happened, there is every reason to believe that some part of the palace was set apart for the offices of religion;—but subsequently, when a regular order of priesthood was formed, it was found necessary to have places appointed for performing the sacrifices, and therefore temples were erected for that purpose.

Before the time of Homer, 900 B.C., there were few temples in Greece. Those mentioned by him are, the temple of Minerva at Athens, that of Apollo at Delphi, and of Neptune at Ægæ. He represents the sacrifices to have been performed on altars in the open air; and it is obvious from the terms which he employs, that the temples of Minerva and Apollo were roofless. That temples existed on the Asiatic coast is certain, for Hecuba is described by him as leading a procession of matrons to the temple of Minerva, in the city of Troy, in order to propitiate the goddess.

There is every reason to suppose, however, that until after the time of Homer there was no regular priesthood in Greece, and that the office of priest was vested in the kings. The altar appears to have been the only structure for sacred use at this period, and the tops of the mountains were selected, not

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so as to produce that curvilinear form. Near Noto in Sicily, in the district of Falconara, on the road from Mititello to Vizzi; also in Sardinia, where these chambers are known by the name of Norages; and at Tusculum, near Rome, the same construction exists; but in none of these do we possess such correct dates as Pausanias and history itself furnish of those of Orcomenus and Mycenæ."—*Vide* supplementary volume to the 'Antiquities Athens.'

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only by the Greeks, but by other nations,* for the worship of their gods; and we read in the Iliad that Hector sacrificed on the top of Ida. The altars erected on the hills were at first only enclosed by walls and the abodes of the priests, but when the forms of their worship became more mysterious, and to them more sacred, these altars were concealed from the public view by more lofty erections, which, in the first place, were composed of wood. The temple of Delphi, mentioned by Homer, is supposed by Bryant to have been founded by Egyptians, and was, according to Pausanias, a mere hut covered with laurel and branches.

That temples of wood, in Greece, preceded those of stone, is certain; and considerable ingenuity has been exercised to prove that they were the types of the latter,—that each part of the stone building corresponds with and was copied from that previously constructed in wood. The greatest dissimilarity between the wood and stone buildings must have been in the space between the upright supports. It is scarcely to be supposed that where timber was to be obtained in good lengths and thicknesses, they would have placed the supports so near each other as we find in every example of a columnar temple of stone: further, it is not probable that, however prodigal they might have been of their material, they would have placed their tie-beams so near each other, as must have been the case if the ends of them are to be compared to the triglyphs of the frieze. However, after the admission of this theory by so many writers on Architecture, it would be profitless to wander from the path they have trodden, and would occupy more space than we can give to the subject.

It is still a matter of conjecture in what city the first Grecian Doric temple was erected; but we are informed by Vitruvius that Dorus, the son of Hellen, reigned over Achaia and Peloponnesus, and that he built a temple of the Doric Order on a spot sacred to Juno, in the ancient city of Argos, 1200 years

* *Vide* Numbers xxiii. 14. Strabo informs us that the Persians always performed their worship upon the hills.

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before Christ. Many temples similar to it were afterwards raised in the other parts of Achaia.

There exists no doubt but that the temples in Asia Minor were far in advance, in an architectural point of view, of those in Greece Proper, and that the art of erecting substantial structures was derived directly or indirectly from the Egyptians, as many of their religious rites and ceremonies were similar to those of Egypt.* The columns in front of a tomb at Beni-hassen, in Egypt, bear a strong resemblance to the Doric column; they have twenty shallow flutes, and a simple abacus, without any base or plinth. The date is supposed to be 1740 B. C. The Dorians, Æolians, Achæans, and Ionians (descendants of Hellen), are said to have acquired considerable knowledge of the arts and sciences, which they must have derived from the surrounding nations, and afterwards imparted to the Grecian states from whom they originated. From the buildings that were raised by these tribes were taken the two Grecian Orders of Architecture, viz. the Doric and the Ionic, which have been called after their originators, and by them introduced into the other Grecian states. Architecture, as well as all the other arts, could only be carried to perfection by very slow steps, and many changes and improvements must have taken place in their temples before they could have arrived at that beauty of proportion and excellence of design which are evinced in the works of the time of Pericles (about 460 B. C.).

History furnishes us with few means of ascertaining the progress and condition of the Fine Arts among the Greeks between the period commonly assigned to the siege of Troy (1180 B.C.) and that of the time of Solon and Pisistratus, 594 B.C. One of the earliest temples of the Greeks, that of Jupiter at Olympia, must, according to Pausanias, have been built about 630 years before the Christian era; that of Diana at Ephesus was begun at a period a little less remote. After this time

* Cadmus, son of Agenor, King of Phœnicia, who is supposed to have lived 1530 B. C., is said to have instructed the Greeks in the worship of the Egyptian and Phœnician deities, and to have taught them various useful arts.

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temples were reared at Samos, Priene, Magnesia, and other places, up to that age when, under the administration of Pericles, the Architecture of Greece attained perfection; and the highest beauty whereof it is supposed to be susceptible was displayed in the Parthenon at Athens.*

Notwithstanding the magnitude of these works, the science of Mechanics was in its infancy, and the Greeks bestowed but little attention on their private houses: all the splendour and magnificence of art was reserved for the embellishment of their temples and other public buildings.†

The most splendid period of the Grecian history was between the sixth and fourth centuries before the Christian era, during the time of the wars that were carried on between the Persians and the principal states of Greece, and to which the greatest prosperity of the Athenians may be attributed: literature was cultivated, and the arts of architecture and sculpture, which were employed to ornament the city, were carried to a degree of excellence that has never been surpassed. Greece was conquered by the Romans 146 B. C., and became a Roman province, although Athens and Delphi were declared as free towns. Its history from this period is without interest to us in our inquiry into the progress of art. It was overrun by the Goths in 267 A. D., and again in 398 A. D. under Alaric; and after being occupied by the Crusaders and Venetians, at last fell into the power of the Turks, on the conquest of Constantinople.‡

* This temple, dedicated to Minerva, was built by Ictinus, under the direction of Phidias, who enjoyed the most exalted reputation, and executed the unrivalled sculpture which adorned it.

† One remark may not be out of place here, which will explain the mode of deciding on the date of the temples, viz. that in the earliest the diameter of the columns was greater in proportion to their height, and the intercolumniations were less, than those of a later period.

‡ We have been compelled to go into the general history of the nations in which Architecture has originated, as it is nearly impossible to give the history of one without the other. An improvement in art has invariably been caused by some great change in the policy or religion of nations.

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CHAPTER III.

ROMAN ARCHITECTURE.

THE Architecture of the Romans can scarcely be said to be original; it was unquestionably borrowed from the Etruscans. Etruria, a city of Italy now called Tuscany, is supposed to have been a colony of Greece. This opinion has been formed by the great solidity of the walls that surround their cities, consisting of enormous blocks of stone, similar to the masonry of the Cyclopes, and said to be coeval with the walls of Tiryns, Mycenæ, and other works of a very early age. The instruction in the art of building that the Romans received from the Etruscans was not probably before the time of the Tarquins, 540 B. C., when their edifices began to be constructed on fixed principles. The first Tarquin, who was a native of Etruria, did much towards the improvement of Rome, and brought from his native country a taste for that grandeur and solidity which prevailed in the Etruscan works. Under his reign the city was fortified, and the walls built of hewn stone. The reign of the second Tarquin was distinguished by the erection of temples, schools for both sexes, and halls for the administration of justice; this was about 508 B. C.: but to Tarquinius Superbus, the seventh and last king, Rome was indebted for its greatest improvements; he continued the building of the temple of Jupiter Capitolinus, finished the Circus and other public buildings, and made a regular drainage of the city to the Tiber.*

It will be impossible to trace the Architecture of the Romans through its various stages between the time of the last king, 508 B. C., and the subjugation of Greece by that people in 145 B. C., a period of 363 years. The disputes in which they were continually engaged left little leisure for the arts of peace.

* The cloacæ, or sewers, which extended under the whole of Rome, were a work on which time and expense were not spared; they were of wrought stone, and in height and breadth were so considerable that a cart loaded with hay could pass through them. How insignificant must our own drainage appear in comparison with this stupendous work!

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During the time that Appius Claudius was Censor, about 309 B. C., the earliest paved road was made by the Romans: it was first carried to Capua, and afterwards continued to a length altogether of 350 miles: it was paved with the hardest stone, and it remains entire at the present day. To Appius Claudius belongs the honour of raising the first aqueduct: the water with which it supplied the city was collected from the neighbourhood of Frascati, about 100 feet above the level of Rome.

The materials for carrying on a continuous investigation of the styles of the Roman buildings are so scanty, (as in the case of Grecian Architecture, without examples whereon we can reason,) that we will not detain the reader with useless speculations, but at once proceed to that period when Greece was reduced to a Roman province, 145 B. C. Art, in the strict application of that word, was not properly understood by the victorious Romans at this time; but after a succession of triumphant wars, when immense treasure was brought to Rome, and they wished to celebrate their victories, there became a necessity for erections to record them, and the riches that were amassed were expended in the adornment of Rome.

The Greek Architects who settled in Italy executed works of great beauty; they founded a school of art, and modified that which was practised in their own country, to suit the habits, taste, and climate of the Romans. The Romans were at all times anxious to subjugate, for their own purposes, those nations that successfully cultivated the arts; a motive which, joined to the desire of aggrandizement, induced them at a very early period to carry their arms against the Etruscans, who were in a far higher state of civilization than themselves. We find that they drew supplies of artists from Sicily, Asia Minor, and Greece, instead of employing their own citizens. Although, in Rome, Architecture lost its simplicity, it gained in magnificence: it there took a deeper root than the other arts, from its affording, by the dimensions of its monuments, more splendour to the character of so dominating a nation.

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The first effort of Architecture was shown in the temple reared to Minerva at Rome, by Pompey the Great, about 60 years B. C. The villas of the Romans were at this period of considerable extent: the statues of Greece had been required for their decoration, besides a plentiful supply of all that Greek art afforded. We find that Cicero was in the habit of employing two Greek architects, Chrysippus and Clustius, on his buildings.

The first permanent theatre that existed in Rome was built by Pompey, 54 B. C., and was capable of containing 40,000 persons.

In the time of Augustus (from 30 B. C. to 14 A. D.) we find that the Italian buildings attained a point of magnificence far beyond all that preceded. The conquest of nearly the whole of the then known world, added to a general peace, allowed the sovereign to turn his thoughts to the improvement of his country; and a constellation of illustrious philosophers and poets, who shone at this time in the metropolis of the empire, gave the minds of the people an inclination towards subjects more useful and honourable than the conquest of remote and unoffending nations. The patronage of literature with the fine arts by Augustus produced the most brilliant results, and has caused a veneration for the age in which he lived. The perfection which literature and architecture attained during his dominion effected more towards immortalizing Rome than all the conquests of its emperors, and raised its inhabitants to a state of civilization never before equalled. By him was erected the temple and forum of Mars the Avenger, the theatre of Marcellus, and a large number of other public buildings. (His boast was not a vain one, when he asserted that he found his capital built of brick, and he left it of marble.)

Nero was the next emperor (with the exception of Claudius*) who seemed to have given his attention to Architecture, but his buildings must be considered more as monuments of

* During the reign of Claudius, one of the finest aqueducts of Rome was completed, whose length is 46 miles, and the water passes over arches

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his prodigality and expenditure than of correct taste. A palace was erected for him, than which nothing could be more gorgeous, nor could the pomp of decoration be carried further.

The reigns of Vespasian and Titus are justly celebrated by the erection of baths and amphitheatres of such magnitude as to astonish the world, and to which nothing of their kind, either before or since, will bear comparison. The Coliseum, so named from its gigantic dimensions, was commenced and finished by Vespasian and Titus: it was capable of containing 109,000 spectators, who could view the sports and combats in the arena. The baths of Titus were among the wonders of the age; but their remains are not so perfect as those of others, although they are still majestic.* The temple of Peace, the largest covered building of antiquity, and another temple dedicated to Minerva, of the richest and most exquisite workmanship, were erected at this time, from 70 to 81 A. D.

To give a further description of the buildings of ancient Rome would be unnecessary, as our object is only to treat of the history of the Styles of Architecture, to show the periods at which they attained their greatest excellence, and to trace, as far as possible, the connection of one with the other. We therefore pass over the reigns of Trajan and Hadrian, celebrated for some fine architectural works, and proceed to the styles that sprung up, on the decline of the empire, among those nations who borrowed their first principles of art from the Romans. For a description of the Roman Orders, with remarks on their application to our present buildings, the reader is referred to the Treatise on 'Ancient and Classical Architecture,' by W. H. Leeds, Esq., published as the sixteenth volume of this series.

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raised more than 100 feet from the surface of the ground for nearly 10 miles of it.

* The baths of Diocletian, erected 294 A. D., were of great extent and magnificence, and are in a better state of preservation than those of Titus.

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CHAPTER IV.

BYZANTINE AND ROMANESQUE ARCHITECTURE.

FROM the time of Hadrian, 117 A. D., to that of Constantine, 306, a general decline in the Arts took place, which, however, seemed to revive during the reign of the latter emperor.

The Christians at Rome, who, during the time of Diocletian, had borne persecution and the destruction of their religious buildings, were now permitted openly to avow their creed.

In 324, Constantine, who, if he had not embraced Christianity, was favourable to its followers, extended his laws, and ordered that the churches which had been demolished during the former reigns should be rebuilt, and the property of the church restored; he exempted the Christian clergy from personal taxes, and granted donations and privileges to the churches.*

The Christian religion may be said to have rendered the most essential service to the Arts, and contributed to the revival of the genius of the artists, after a period of barbarism, by the preservation of many remains of Ancient Architecture,

* By an edict of March, 321, he ordered the observance of the Sunday and abstinence from work on that day: he published an edict addressed to all the subjects of the empire, in which he exhorted them to renounce the old superstitions, and to adore only one God, the Saviour of the Christians. In 313 A. D. he abolished the punishment of the cross, which had existed until then.

In 325 he assembled and attended in person the first universal council of Nicæa, the object of which was to oppose the Arian heresy, then gaining ground in the East, although in 328 he recalled several Arian bishops who had been exiled by the council. This change is said to have happened at the instigation of Constantia, his sister, who was herself in the Arian communion.

Athanasius, Bishop of Alexandria, opposed the re-admission of the Arians into the orthodox church, which led to a controversy between him and the Emperor, which lasted until the death of the latter, 337 A. D.

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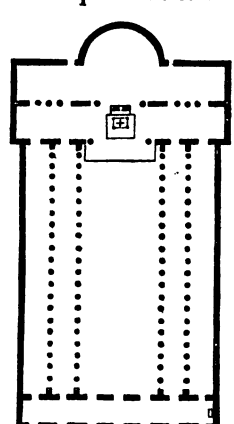
which became embodied in the buildings they erected for religious purposes.

The style of building employed by the Christians in the churches they erected, during the time of Constantine and his immediate successors, would necessarily resemble that of the basilicæ themselves; for the materials employed must have influenced the design, and columns taken from other buildings could only be applied in a manner somewhat similar to that in which they had been previously used.

The basilicæ, or halls of justice of the ancient Romans, were undoubtedly the types from which the early Christian places of worship were taken; and the ruins of these buildings were the chief materials used. In several instances the columns that divide the centre part of the church from the aisles have been taken from other edifices, either on account of the want of artists capable of executing anything equal to them, or the haste with which they were erected.

The expedient that was adopted tends to show that proportion was not considered; some columns were reduced from their former height, and others mounted on pedestals to suit the purposes to which they were applied. Besides this total disregard to proportion in the shafts of the columns, capitals and bases were applied without any consideration to their fitness. In addition to the reasons we have given for these inconsistencies, another probably may be added, viz. want of means, which might well be the case, when we see the state to which the Christians at Rome were reduced prior to their emancipation by Constantine.



Plan of the Basilica of St. Paul's, without the walls.

The heathen basilicæ, generally situated in the forums, were of rectangular form, and divided into three or five

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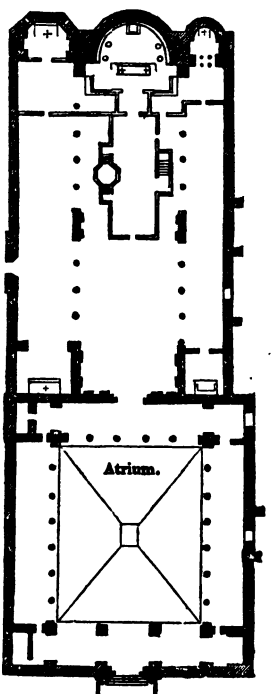
parts by rows of columns parallel to the length of the building; another colonnade at the extremity crossed the former at right angles, and in the middle of the end wall was a semicircular recess, in which was situated the tribune of the judge. These basilicæ had likewise galleries over the aisles, in which commercial or other business was transacted; but in the Christian churches this was appropriated to the women, who (as in the Jewish synagogues) were not allowed to join with the men in the lower parts of the building. These galleries were omitted in the after basilicæ, and one of the aisles was retained solely for their use.*

The basilica of St. Clement at Rome demands our attention from its antiquity and the peculiar character of some parts of its plan. It is stated to have been built on the very spot formerly occupied by the house of St. Clement, the immediate successor of St. Peter. It acquired importance under Leo the Great in 449, and was afterwards embellished by John II. During the eighth and ninth centuries, Popes Adrian I. and Nicholas I. restored this basilica. In 1112 the church was repaired by Cardinal Anastasius, by whose orders the mosaics and the marble episcopal chair were added.



Plan of St. Clement's.

The plan of this building re-

* Six of the principal churches or basilicæ at Rome are attributed to the zeal of Constantine. The basilicæ of St. John de Lateran, St. Peter, St. Laurentius, St. Paul, St. Agnes, and St. Stephen, were built by him, besides the baptisterium that bears his name.

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sembles, more particularly than any others, that of the earliest basilicæ. It is entered by a court, which is surrounded by porticoes supported by columns and piers; on the sides parallel to the front of the church arches spring from the columns, but on the others there are only architraves. Under the portico nearest the temple were placed the holy water vases, for the purpose of purification, (a custom taken from the Jewish and Pagan rites,) until in after-times they were removed into the body of the church, near the western door. Here, likewise, the penitents, and those who were not permitted to share in the holy sacrifice, used to remain during its performance.

The centre part of the atrium or court was used for the purpose of burial after the custom of interring 'extra muros' fell into disuse. Some remains of ancient sculpture tend to a belief that the atrium was at an early period used for this purpose.

The sanctuary of this church, as in all the Christian temples of the first ages, is semicircular in plan, and contains the altar, the cathedra, or throne for the bishop, and exedræ, or benches for the priests. It is surmounted by a half-cupola, the front of which is richly ornamented with marble and paintings, representing our Saviour, the Apostles, and the emblems of the Evangelists. The cupola is covered with paintings of foliage on a gold ground; the remainder of this semicircular part, known by the name of 'apsis,' is richly ornamented with figures of the Saints. On each side of the great apsis were secondary apsides, which are now used as chapels, although in the primitive church they were appropriated to a different purpose. One of them was called the vestiarium, and contained the priests' robes and the consecrated vessels, and was the origin of our vestries; the other, the evangelium, received the sacred books, charters, &c., and gave rise to charter-houses and libraries.

This ancient arrangement still exists among the Greeks. In the church of San Dimitri at Smyrna there are two apsides, closed by curtains only, devoted to these purposes.

The chancel, which was used by the inferior order of eccle-

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siastics, and contained the pulpits and ambones, is situated in front of the apsis, and enclosed by a low partition of marble: it is raised one step from the level of the church. The floor is decorated with mosaics, composed of a combination of various sorts of precious marbles and porphyry.

The arrangement of this basilica is nearly the same as all that followed it, although in later examples sculpture, painting, and mosaics were much introduced to decorate the walls above the side arches, as well as those of the aisles.

The women here were placed in the north aisle, the men in the south aisle,* and the centre part or nave was reserved for processions.

About the year 328 A. D., Constantine, who had hitherto, when at peace, resided at Rome, commenced his new capital in the East, which was called after his name, and in May, 330, was solemnly dedicated to the Virgin Mary. He adorned it with so many stately edifices that it nearly equalled the ancient capital itself; he here built a cathedral dedicated to Santa Sophia or the Eternal Wisdom, and a church to the Apostles.† This cathedral, having been twice destroyed by fire, was finally rebuilt about 532 A. D., by Justinian, who had invited the celebrated architect Anthemius to Constantinople for that purpose. It was completed in six years from the time of laying the first stone.

The emperor, in his admiration of this magnificent edifice, is said to have exclaimed, "I have vanquished thee, O Solomon:" and with justice might he glorify himself; for the dome of St. Sophia is the largest in the world, and the more

* This observance is still retained in many churches in Greece, by partitions between the columns with curtains hanging above them, so as to intercept all communication between the sexes.

† Helena, the mother of Constantine, caused several churches to be erected in the East; the most celebrated was that of the Holy Sepulchre, at Jerusalem. The Church of the Nativity, at Bethlehem, supposed to have been erected on the site where our Saviour was born, has been likewise attributed to her.

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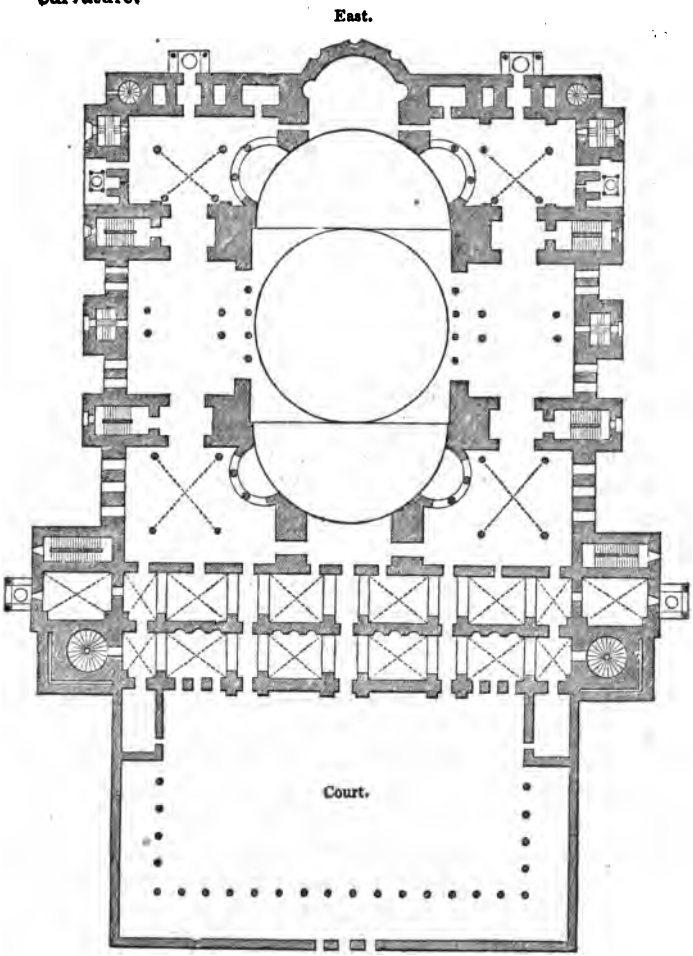
to be admired in its construction from the lowness of the curvature.



St. Sophia.

This church, after twelve centuries, remains the same, with

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the exception of the mode of worship to which it is devoted. It still retains its former name, but the Mohammedans, instead of the Christians, possess it.

This being the earliest Byzantine building extant, and totally dissimilar in arrangement to the Christian churches in the empire, a short notice of it is necessary.

The plan of the interior is that of a Greek cross, the four arms of which are of equal length; the central part is square, the sides are about 115 feet in length. At each angle of the square a massive pier has been carried 86 feet in height from the pavement, and four semicircular arches stretch across the intervals over the sides of the square and rest on the piers The interior angles between the four piers are filled up in a concave form. At 145 feet from the ground is the level of the springing of the dome,* which is 115 feet in diameter. The form is a segment of a circle, and the height is equal to one-sixth of its diameter at the base. On both the eastern and western side of the square is a semicircular recess, with domes that rest against the main arches, and assist in resisting the lateral thrust. On the north and south sides of the square are vestibules forming a square on the plan. Above the vestibules are galleries appropriated to women during the performance of worship. The whole church is surrounded by cloisters and enclosed by walls.

The total cost of St. Sophia has been reckoned at the lowest computation to have exceeded one million pounds; as before the building was four feet out of the ground, its cost had amounted to a sum equivalent to £200,000 sterling.

Besides this cathedral, Justinian is said to have built, at Constantinople, twenty-five churches to the honour of Christ, the Virgin, and the Saints; he also built a church to St. John at Ephesus, and another to the Virgin at Jerusalem: the bridges, hospitals, and aqueducts erected by this emperor were numerously distributed throughout the empire.

* This dome is constructed of pumice-stone and very light bricks from isle of Rhodes.

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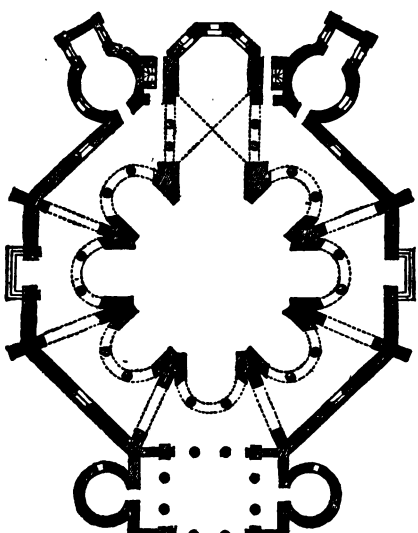
To give a connected description of the architecture between the sixth and eighth centuries would be as difficult as unsatisfactory; the irruptions of the Goths and other nations caused a division of the empire. Those who settled in various cities in Italy, erected buildings partaking of the Roman character, yet possessing both novelty of arrangement and purpose.

One of the most interesting churches of the Byzantine or Romanesque style is that of St. Vital at Ravenna,* built by Justinian, when he expelled the Goths from Italy: this church is much embellished with mosaics.



Plan of St. Vital at Ravenna.

* The Goths, after the conquest of Italy, established the seat of their power at Ravenna. Theodoric, one of their kings, and a lover of the arts, restored its ancient edifices; and numerous altars were erected for the religion he had embraced.

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The striking similarity between the plan of St. Vital and that of the churches of St. Sophia and Sergius is sufficient to induce the supposition that its founders employed architects from Constantinople. The plan is an octagon, to which several round towers and a semicircular apsis are added. One great peculiarity, which shows a deviation from the Roman work, is seen in the double window, having a column in the centre, from which spring two semicircular arches forming the heads to both openings, which are encircled by another arch extending across the whole width of the window.*

Whatever may be said against the Goths for the manner in which those large hordes overran Italy, and caused a change in its policy, yet it would be most unjust to consider them as a people who could not appreciate art, simply because some of the fine architectural works were destroyed in the excesses that succeeded the conquest of Rome. When Rome was in possession of Odoacer, chief of a Gothic tribe, in 476, he exerted his utmost for the preservation of the arts. Theodoric, his successor in 493, who was educated at Constantinople and established his residence chiefly at Ravenna, passed laws to prevent the neglect of, or depredations of the citizens of Rome upon, the works of art still existing in the capital. Under his reign, Rome and Ravenna, as well as many of the Italian cities, were adorned by the erection of churches, palaces, porticoes, aqueducts, and baths. The successors of Theodoric did not, however, follow his example; for in 547, when Rome was plundered by Totila, the arts in Italy may be said to have become completely extinct. From the year 568 up to the conquest of Italy by Charlemagne in 774, the country was overrun by the Lombards, who brought with them no style of their own, but employed the architects they found in Italy. From 774 to 813, Charlemagne caused to be erected, in different parts of his extensive dominions, many grand buildings dedicated to Christianity.

* This indicates a great feature in the style which in a few centuries was distributed throughout the northern parts of Europe.

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Among others, we may mention the cathedral of Aix-la-Chapelle in Germany, which the marbles brought from Ravenna and Rome served to decorate. The portico of another of his churches exists at Lorsch, near Worms, in Germany. In France, all the churches of that period have been subsequently rebuilt, and it is impossible to determine with certainty if any parts remain in their original state.

We now arrive at a period when the dominion of Charlemagne extended from Italy to the Baltic. He established cities in different parts of Germany and France, and naturally carried the architecture of Italy to the northern parts of Europe, which in the general outline conformed to the Italian models, although the details might have varied considerably.

In consequence of the intercourse which still subsisted between Italy and Greece after the fall of the Western Empire, the natives of Greece are supposed to have been employed to construct the ecclesiastical edifices of the former. Thus in the ninth, tenth, and eleventh centuries the cathedrals of Venice and Pisa, as well as that at Ravenna, were built.

The most important of the Italian churches built in the Constantinopolitan or Byzantine style is the cathedral of St. Mark at Venice, which is said to have been erected in the ninth century by a Greek artist. Its plan is that of a Greek cross, and each arm is roofed with a semicircular vault; these terminate against four semicircular arches on the sides of a square, about 42 feet long; above this is a circle, containing a row of windows which light the interior; and on this is raised the central or principal dome, which is of a hemispherical form. The church is divided longitudinally and transversely by rows of columns supporting semicircular arches. Over each of the arms of the cross are domes of equal size, but rather smaller than that in the centre. The exteriors of these domes are covered with lead, and surmounted by crosses. This building has undergone many alterations since its original construction, and the ornaments are of a much later date than

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the rest of the edifice. The plans of this church and of St. Sophia are very similar.

Before we turn to the churches of the northern parts of Europe, we must notice the buildings of Pisa, in Italy, which retain the distinguishing features of the Byzantine and Romanesque styles: they consist of the cathedral, built in 1016 by Baschetto; the baptistery, in 1152, by Dioti Salvi; and the campanile or belfry, which was built in 1174 by two architects, a German and an Italian,—William of Inspruck, and Bonnani of Pisa.

The cathedral of Pisa, with the baptistery and belfry belonging to it, form a group of buildings to which as much interest is attached as to any in Italy. The cathedral in plan resembles the Latin cross, which differs from the Greek in having one of its arms longer than the other three: this is one of the oldest of the Christian churches of this form, which has been followed in all the cathedrals of the north-western part of Europe.* The length is 304 feet, and the width 107; the transverse branch is 234 feet by 55 feet in width.

The plan is divided longitudinally into five parts; the nave is 40 feet broad, and 128 feet in height; this is separated from the aisles by twelve Corinthian columns, of oriental granite, on each side: from the capitals spring semicircular arches, which carry smaller columns, forming the front of an upper gallery, appropriated to women. The columns that separate the aisles are smaller than those of the nave, but are raised on pedestals to an equal height. The nave is roofed with timber, but the aisles are vaulted and painted.

The western façade consists of five stories: the lower one is composed of seven arches, supported by Corinthian columns and two pilasters; under three of these arches are the entrance doors: the second tier contains nineteen arches; the third has nine arches in the centre of equal height, but on each side they diminish in height, following the *slope* of the roof of the aisles:

* The cathedral at Worms, built in 1016, is similar in this respect.

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above this is another row of columns and arches of equal height, surmounted by columns and arches diminishing with the inclination of the roof of the nave. The arches and columns in the lowest tier are attached to the wall, and all above are detached from it, and have a narrow open gallery in their rear. This arrangement of arcades in the façades is a feature peculiar to churches of this date in Italy, and was partially copied in other parts of Europe.

The baptistery, close to the cathedral, is a cylindrical building of marble: it is 100 feet in diameter within the walls, which are 8 feet 6 inches thick. On the exterior are two orders of Corinthian columns, supporting semicircular arches; the columns of the upper order are less in height than the lower, each intercolumniation below being equal to three above it. These smaller arches are finished by pediments and pinnacles.* From this springs the dome, divided by twelve ribs, between which are small dormer windows; the cupola rises above this in similar divisions. The total height is 179 feet. The dome is double, and built of brick; the inner one being pedimental, resting on granite columns and piers, and supporting the cupola, which is covered with lead and tiles.

The campanile or bell-tower, likewise near the cathedral, is of a cylindrical form, 50 feet in diameter, and 180 feet high. This consists of eight tiers of columns, supporting semicircular arches, forming open galleries: the roof is flat, and the upper story contains some bells. A remarkable circumstance in this tower is, that the top overhangs the base upwards of 13 feet. This peculiarity is observable in several other Italian belfries, and has doubtless resulted from defective foundations. In this instance we have conclusive evidence that the failure exhibited itself before the building was completed; for on one side the columns are higher than on the other, thus showing that the builders endeavoured to bring the upper part of the tower

* The pediments and pinnacles are supposed to have been introduced subsequently to the original construction of the edifice.

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nearer to a vertical direction, or at least to lessen the inclination of that which deviated from its horizontal position.

Having now given a general description of the peculiarities of the churches of Italy which appear to have been the work of Greek artists, similar in arrangement and mode of execution to the Byzantine churches of the East, as well as of those that are specimens of the Lombardic style, we will now proceed with a few observations on the ecclesiastical buildings of Germany, France, and Normandy, which were the direct sources from which the architecture in our own country proceeded.

CHAPTER V.

THE ARCHITECTURE OF GERMANY, FRANCE, AND NORMANDY.

THE difficulties attendant on the historical part of our present inquiry are such as to hinder our taking a chronological survey of the different variations of styles of architecture that prevailed in different parts of the Continent up to the twelfth century. The poverty and indistinctness of the notices of the erection of early buildings,—the difficulty of identifying those described with those that exist,—the confusion of works protracted, suspended, and built in imitation of others, which was frequently the case, or in accommodation to them,—would tend, if they were properly examined, to make this part of our inquiry too lengthy; and after every care, very unsatisfactory conclusions would be arrived at. We therefore confine ourselves to notices of such buildings as bear upon our purpose, or which may have some peculiarity of character.

The edifices erected for the purposes of religion are nearly the only records of architecture that have been spared to us; other buildings were demolished in the course of events, but

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the sacredness of their intent preserved them from the hand of the destroyer, when idolatry had ceased to exist, and the Christian worship was practised throughout Europe.

Germany lays claim to churches of antiquity, superior to those of any other country on this side of the Alps: those existing of the tenth and eleventh centuries are very important in the history of art, and testify extraordinary solidity and magnificence. Such are the churches of Spire, Mentz, and Worms. That of Spire was founded by Conrad II., in 1030; the east end of that at Worms, still earlier, was commenced in 996, and the building was consecrated in 1016: the oldest part of the cathedral of Mentz is said to be of the date of Archbishop Willigris, between 978 and 1009.

One of the most instructive as well as the most ancient of these churches is that at Worms, now in a very perfect state of preservation. The plan is strongly distinguished by the cross: the piers separating the nave from the aisles are square, with columns at alternate piers, to carry the stone vaulting, which embraces two compartments of the lateral arches between each groin or rib. The east end is square on the face externally, but semicircular inside; thus retaining one of the principal features of the Romanesque basilicæ. On each side are circular turrets containing staircases, and corresponding with two at the west end, although of somewhat larger dimensions. The entrances are in the north and south sides, and nearer the transepts than the west end. This arrangement is quite at variance with all preceding buildings; as instead of the three doorways at the west front, there is an apsis of the form of three sides of an octagon, which is used as a chapel. At the intersection of the nave and transepts springs an octagonal tower, which is scarcely higher than the nave roof, and covered with a cupola: the turrets are carried to a great height, and terminate conically. This church, as well as those of the same date, is vaulted with stone throughout, which caused the introduction of the shaft on the face of the piers, and is one great deviation from the arrangement of the Roman

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basilicæ, which were covered with horizontal ceilings; or else the wooden roofs were left exposed, which rested on the walls, without having any relation vertically to the substructure.

The church of St. Castor at Coblentz, part of which was built in the eleventh century, is likewise executed with semi-circular arches, which spring from square piers, to each face of which a half-column is attached. This may be considered as one of the steps leading towards the clustered columns, which gradually were introduced in the naves of all churches throughout the western part of Europe.

The early German churches, although differing considerably from each other in their general plan, still retain peculiarities that are not to be seen in those of other countries, though erected about the same period, or rather later. The octagonal form of the aspides and turrets, and their enrichments generally retaining a primitive character, make their Lombardic origin perceptible. The square piers which support the nave arches evince a direct departure from their Italian types; there is likewise a prevalence of rectangular faces and square-edged projections. This general simplicity may be well accounted for, when we consider that the chief impressions were received from Romanesque examples, which were simplified from necessity; as there was great deficiency in knowledge of art, although no inferiority in mechanical skill.

In the cathedral of Worms we find the pointed arch, which was not introduced generally until a century after the erection of that building; therefore if this was not added subsequently, it confutes many of the theories as to the causes and dates of its introduction.

The church of Gelnhausen, in Suabia, which was built in the beginning of the thirteenth century, is one of the earliest German churches in which a positive change of style is perceptible throughout; although in many of those of the eleventh and twelfth centuries there exist deviations from the unity of the designs which are difficult to be accounted for.

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The heads of the windows, instead of being semicircular, are of the lancet form, with cusps, and differ from the proportions before adopted by being long and narrow. The arches and windows in the nave have trefoiled heads, and the windows of the central tower possess a marked distinction from the earlier arrangements, having the three apertures with trefoils inscribed in a semicircular top, and separated by mullions.

The church of St. Catherine at Oppenheim, commenced in 1262, resembles in plan that of Worms, being in the form of a Latin cross, and having semi-octagonal chancels at the east and west ends. The latter is of a subsequent date, and was not consecrated before 1439. This peculiarity is observable in several other churches in Germany: the entrances are on the north and south sides.

The cathedral of Strasburg, which was begun in 1277, and brought to its present state in 1439, holds the first rank among the Gothic churches of the Continent, in point of the high degree of enrichment which prevails throughout. The length of the body of the church is 324 feet, and the height of the nave vault is 98 feet. The western façade is divided into three parts, vertically, by buttresses richly ornamented with canopies and statues. The three entrances are crowned by crocketed gables, and the diverging sides of the doorways are completely filled with niches and statues.

This cathedral has but one of its spires completed, which is at the north-west angle: it is perforated in the richest manner, and in height it exceeds any other church in Europe, being 414 feet from the ground.

Before we bring our view of the architecture of Germany to a close, we must not omit to notice the cathedral of Cologne, which, if it had been completed, would have been the most magnificent and exquisitely ornamented ecclesiastical building ever erected. The plan exhibits a symmetry not surpassed by any of the works of the best days of Greece or Rome: it consists of the nave and two aisles on

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each side, and two western towers; the eastern end is composed of seven engaged chapels. Charlemagne erected a church on the present site, which was destroyed by fire in 1248. Conrad, who filled the archiepiscopal throne of the city at this time, resolved on the erection of a new church; and on the 14th of August in the year following the destruction of the old edifice, laid the first stone of the new fabric with every possible solemnity.

The magnitude of Conrad's intention, or rather of Gerard's design, may be arrived at by a consideration of its general dimensions. The whole length is upwards of 500 feet; the width of the aisles, 180 feet; the width across the transepts, 290 feet: the roofs are more than 210 feet in height; and the height of the western towers, when finished, would have exceeded 500 feet; they are 100 feet wide at the base. For carrying out this extensive design, collections were made throughout Europe; and nearly the whole wealth of Cologne itself was applied to make this the finest building in the world. Notwithstanding the large sums of money that were raised, and all the industry and activity of a large number of workmen, this gigantic structure could only proceed slowly, as all the stone was wrought, and had to be conveyed from Kœnigswainter and Unckel-Bruch, on the Rhine. The foundations alone of the southern tower were laid at least 44 feet below the surface.

The unprofitable wars of the bishops of Cologne tended to dissipate their treasures; and although the works were not interrupted, they made but little progress. In the year 1322, seventy-four years after the first stone was laid, the choir was consecrated. The zeal of those who contributed was much damped by the misappropriation of the funds; for about 1370, little activity seems to have been evinced on the works, as the nave and southern tower were only a few feet above the ground. In 1437, Thiery de Moers carried up the latter to the third story. In the early part of the sixteenth century, the nave was brought up to the capitals of the aisles, the northern

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tower carried up to a corresponding height; and after the windows on the north aisle had been ornamented with painted glass, the works stopped altogether.

That this work of genius and art should have remained three centuries without anything having been done, except for its preservation, must be a matter of deep regret to all who feel an interest in architecture; and more particularly so as the suspension of its works was caused by civil discords, which diverted the funds that ought to have been applied to it. But there is one other cause to which its non-completion is to be attributed: the style in which it was designed was passing away; new ideas of art prevailed, owing to the revival of the Italian styles; and the love of variety and change alone produced a distaste for that style of art whose beauties could not be denied, although the sublimity of its origin and development was forgotten. Thus centuries have passed, and with apathy the civilized world has looked on this neglected building with a feeling of its being little more than a monument of something that was to have been, without any effort towards its completion.

The late King of Prussia, desirous for the continuance of this stupendous work, lent his aid in 1824, which, however liberal in amount, was small in comparison with the requirements for its completion. In ten years the expenditure was under £28,000, or about £2720 for each year, of which the greater part was consumed in keeping the building in repair: we have therefore but little hope of more than its preservation.

Another of the celebrated cathedrals of Germany is that at Ulm, commenced in 1377. Its length is 416 feet, its width 166 feet, and its height, including the thickness of the vaulting, 141 feet. The height of the tower, if it had been completed according to the original design, would have been 491 feet: it is placed in the centre of the western façade.

Ratisbon cathedral, which was built about 1480, possesses great claims on our admiration. The west front is flanked by two towers, and, like the former, left unfinished.

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The greatest variety of forms, both in traceries and ornaments, prevails throughout most of the larger churches of Germany that were built in the later period of the Gothic era; and it is to be regretted that our limited space will not permit us to describe the peculiarities of this class of design and carving. Their interesting mouldings and ornaments are of the most florid nature, and totally dissimilar to anything that exists in our own country.

The buildings in France of the ninth and tenth centuries were, like those of Germany, in the Byzantine or Romanesque styles, and decorated with a profusion of mosaic and other ornamental work. These were undoubtedly copied from the basilican churches, or else from those erected by Charlemagne in Germany, where he first introduced the arts that he acquired in Italy. Nothing, however, remains of the churches prior to the eleventh century which would assist in our present inquiry, as no certain date can be assigned to portions of early buildings that still exist, and which possess little interest, except to the critical antiquary.

The invasions of France by the Normans, in the ninth and tenth centuries, caused the destruction of the greater part of the ecclesiastical buildings; and after that period we find a very similar style of architecture to have prevailed in both countries at nearly the same time, although presenting many variations, both in the general design and subordinate details.

On the termination of the ravages of the Northmen or Danes, under Rollo, in the early part of the tenth century, the Duchy of Normandy was ceded to him by the French king, whose daughter he married on condition of his embracing the Christian religion. Peace being now established between them, the French commenced rebuilding their churches, which was zealously followed by their converted neighbours. The influence of Christianity, or their settled position in their newly-acquired territory, induced a civilization which strongly contrasted with their previous piratical habits; and Normandy, both under Rollo and his successor William I., vied

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with France in the erection of churches. The principles of the architecture that prevailed in both countries were identical, being modifications of the Lombardic styles, and were characterized by the general use of the semicircular forms in arches or windows.

One of the earliest of the French churches that presents any features that require our notice is that of St. Germain des Prés, which was rebuilt by Abbot Morard, in 1014. The nave of the church still remains in its primitive state; the capitals of some of the columns possess much of the character of the Corinthian order, whilst others are composed of birds and griffins. In the churches of Normandy, more particularly those of the Holy Trinity and St. Stephen at Caen, the capitals of the columns are direct imitations of the Corinthian order, with the exception of the abaci, which are more massive: they have the volutes at the angles, and two rows of solid leaves above the astragal.*

In the beginning of the eleventh century two of the greatest ecclesiastical buildings of France were erected, viz. the cathedral of Chartres, and the abbey of Cluny. Both are cruciform in plan: the first is 420 feet in length and 108 in breadth, and on the east side of the choir the aisles are double. The abbey church of Cluny, which is perhaps one of the most interesting ecclesiastical monuments in France, was erected in 1056. The style of these buildings is similar to that which prevailed throughout Europe at nearly the same time, and is more familiar to us under the name of Norman.

The buildings in Normandy of the eleventh and twelfth centuries are undeniably the models from which those in our own country were copied; it will therefore only be necessary to give one description of their peculiarities, which will be included in our notes of the Anglo-Norman churches.

* The monastery and church of the Holy Trinity, or Abbaye aux Dames, was founded by Queen Matilda, and consecrated in 1066. St. Stephen's, or Abbaye aux Hommes, was founded by William the Conqueror in 1066, and dedicated in 1077. The upper parts of the towers in the west front were built about 1200.

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Towards the end of the twelfth century an important change took place in the architecture of the western parts of Europe, by the introduction of the pointed arch, which was substituted for the semicircular. Although the cause of this deviation has engaged the attention of many men whose whole time has been devoted to studying the history and practice of architecture, yet, hitherto, no definite conclusion has been arrived at. To describe fully the different hypotheses in which various writers have indulged, would be a matter of curiosity more than advantage, as many seem to result from an effort of imagination, rather than from a careful inquiry into probabilities.*

It has been supposed that the pointed arch is of Eastern extraction, and that it was introduced by the first crusaders on their return into the West.† This opinion is founded on the fact that arches of a pointed form exist in various parts of the

* Mr. Lascelles traces the origin of the pointed arch to the curves of Noah's ark; but from what he takes his authority that it was curved at all is somewhat puzzling. Murphy, the author of a work on the Batalha, is equally mystical in bestowing the parentage of it on the aspiring lines of the pyramids of Egypt. That it was derived from the forms of groves of trees and their branches, as another party asserts, becomes a probability in comparison.

† "Sir Christopher Wren was of opinion that what we now vulgarly call Gothic ought properly and truly to be named the Saracenic architecture refined by the Christians; which first of all began in the East, after the fall of the Greek empire." (Britton's 'Chronological History.') In refutation of this opinion, Dr. Milner asserts that the crusaders did not bring with them into England or Europe a single feature of that style, "since the churches built subsequent to that period do not, in their original works, exhibit one of the features; as, for example, the ancient parts of Exeter and Rochester cathedrals, and the abbey church of Reading. Gundulph, a monk of Bec abbey, afterwards Bishop of Rochester, was the most celebrated practical architect of the age in which he lived. He made a journey of devotion to the Holy Land, a little before the first crusade, and of course had an opportunity of surveying its buildings; yet in the various structures erected by him after his return, we find no traits of the style under consideration."—Milner's 'Treatise on Ecclesiastical Architecture,' and 'Vita Gundulphi.'

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East, and some of these in buildings of great antiquity, such as the tomb or chapel of the Virgin at Jerusalem, the remains of a church at Acre, the tomb of Abdallah, and the hall of Joseph at Cairo. In the façade of the first is a Gothic pointed arch, springing from columns, and there are also two others on the staircase in the interior. This edifice is supposed to have been erected in the time of Constantine, but it is very probable that the arches were constructed at a later period than the body of the building. The antiquity of the church of Acre ascends only to the time of the existence of the Saracenic empire, and it was undoubtedly built by the Christians, whilst in possession of that part of Syria; consequently the pointed arch found in this erection is as likely to have been copied from similar works executed in Europe before that time, as from any building constructed by the Arabians.

It is to be remarked that the form of the pointed arch employed in the Saracenic works differs from that adopted in the west of Europe, in being very slightly pointed, and the aperture being narrower at the foot than a little above it. If, therefore, we suppose that the pointed arch originated in the East, it appears surprising that those who introduced it into France and England should have so far altered its form as to make it spring from the capitals of the columns which support it, and that not one example should exist in this part of Europe similar to those which are found in the Moorish buildings. By this theory it is inferred that its introduction into the West was solely a matter of taste, and not of necessity; but we have numerous instances, both in England and France, which prove that the pointed style was not introduced at once with all its distinctive features, but that pointed arches were intermixed with those of semicircular form in the same building, from constructive causes. This is the case in the church of St. Germain des Prés, described by Mr. Whittington (who advocates the Saracenic origin): "The columns support a series of round arches, except in the semicircular arcade at the eastern end, where they are pointed, in consequence of the

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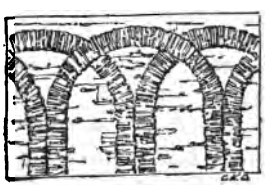
arrangement of the pillars, which are placed in the bow, nearer to each other than where the colonnade proceeds in a straight direction; and the arches rising from them, when brought to an equal height with those of a round shape, become necessarily pointed." This is among the number of instances where the pointed arch was used from accident or necessity. The same arrangement occurs in the crypt of St. Denis, and also in the chapel and crypt of the Holy Trinity at Canterbury. There is one objection to the opinion that the pointed arch originated from this circumstance, viz. that those which are so employed appear to have been erected subsequently to its introduction in some other manner; and that this method was not generally adopted is certain, for in the Tower of London, as well as in some foreign buildings, where there are wide and narrow arches intermixed, the latter are not pointed, although they are of equal height with the others.

The hypothesis of Dr. Milner, if not altogether satisfactory, is entitled to our best consideration, provided the principle is to be entertained that the form was originally a matter of taste, uninfluenced by necessity. It is attributed by him to the intersection of semicircular arches, which were frequently introduced on the surface of the walls in the Norman styles, but placed there solely for ornament, as in St. Botolph's, Colchester, built in 1120; St. John's, Devizes, in 1160, and in numerous other churches. The former is built of brick, and the latter has a flat



St. Botolph's, Colchester.

ziz-zag on the face. At Castle Acre priory, Bristol cathedral, Croyland abbey, and St. Joseph's chapel at Glastonbury, the transition of style is evident, as the mouldings do not altogether cross each other, but are stopped on the inside at the apex; and if the upper part of the semicircle were taken away, the pointed arch would be complete. At St. James's church, Bristol, is one of the most convincing proofs of the correct-

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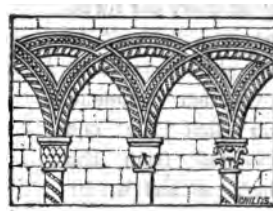
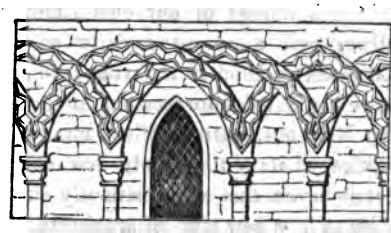
Castle Acre Priory.



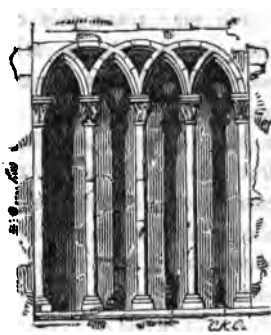
Bristol Cathedral.

ness of Dr. Milner's theory, for within the interlacing mouldings there is a lancet window, the arch of which is struck from the same centres, and follows the inside lines: pointed arches are likewise found interlaced with those of semicircular form, as seen at St. James's, Bristol.



St. James's Church, Bristol.

In the instances above referred to, these intersecting semicircular mouldings are not detached from the wall, and therefore must be looked upon rather as an ornamental than a constructive feature; but at Christ Church, Oxford, erected about 1180, there is an instance of an interlacing arcade, supported by columns entirely disengaged from the wall, and from its construction, as well as its form, may be considered as a transition between the semicircular and the pointed styles.



Christ Church, Oxford.

So numerous are instances of the use of the pointed ir

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close connection with the semicircular form, that it is difficult to reconcile the mind to any other opinion, than that the one proceeded from the other, although by those progressive steps which mark all advancements in the arts of design or construction.* It is more observable in the buildings of our own country than in those of any other, and more particularly so from the time of the Conquest in 1066 to the year 1200, during which period we trace a gradual improvement in the style first introduced by the Normans, until, in the course of attaining the full capabilities of its enrichment, new combinations of forms and details arose that were naturally suggestive of what we consider to be a new style of architecture, although it cannot consistently be regarded otherwise than as a continuous current of design, progressing towards that perfection which it afterwards achieved.

Christ Church, Oxford.

We may reasonably conclude that this is the history of the pointed arch, or rather the pointed window, which preceded it, and that it was not an abstract invention of any class of men or people, but simply the result of attempting a more elegant or novel application of the former style. But afterwards, when this new principle was more fully carried out, the traces of its direct origin were lost, and the pointed style became quite distinct from the circular, except when the whole chain of its progression was considered.

* In the west front of Croyland abbey there are four tiers of engaged arcades. The lowest is semicircular, with zig-zag ornaments: that above it has pointed arches on Norman columns, with a pointed window between; the next above has interlacing mouldings, and the uppermost has semicircular arches on a larger scale. The date is about 1177.

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The advantages of the pointed form over the semicircular were at once apparent, and every endeavour was made by the introduction of mouldings and columns to give all possible lightness and enrichment to a mode of building of itself massive and grand, but the capabilities of which to produce new effects had now become exhausted. The pointed form suggested a greater loftiness and elegance in composition, and to a certain extent the principles of arrangement became different: these again, in their turn, gradually gave place to others, apparently as much at variance with them as they were from the parent source.

With every veneration for the opinion of Sir Christopher Wren, we are at a loss to find anything that is at all satisfactory to prove that either the Saracens of the East or the Moors in Spain were the originators of the pointed style, much less of the arch, which is quite dissimilar, as the Moorish arches which we find in Spain are of the horse-shoe shape; the columns generally single, and not connected in groups; the windows small; the roofs flat, and the general forms horizontal; whereas in the early pointed buildings the roofs and gables are particularly lofty, the pillars high, and composed of beads and columns, and the general character vertical.

Having now given a general account of the opinions on this subject which are most entitled to our consideration, or at all necessary in our inquiry, we must refer the curious reader to the fifth volume of Britton's 'Ancient Architecture' for a full description of the theories of the different writers.

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CHAPTER VI.

SYRIAN, PERSIAN, AND PERSEPOLITAN ARCHITECTURE.

THE ancient edifices of Syria were undoubtedly of a character very similar to those of the Egyptians, if we may judge from the intercourse that existed between these nations. The principal cities of the Canaanites, or Phœnicians, who settled on the coast of Palestine, were Tyre and Sidon; the latter originally the capital, and Tyre, although at first only a colony, became afterwards greater than the parent city itself. Judging from the wealth of a people "whose merchants were princes, and whose traffickers were the honourable of the earth," there can be little doubt but that their buildings corresponded with their resources: it is therefore to be deplored that the entire destruction of the ancient works of their cities leaves us no monument of Phœnician architecture.

When Solomon ascended the throne of Israel, and was desirous of fulfilling the wish that his father had entertained of building a temple for the reception of the Ark of the Covenant, he was obliged to send to Tyre for an architect, as well as for workmen. The description of this temple is to be found in the sixth chapter of the first book of Kings. Its plan was a parallelogram of about 109½ feet by 36 feet;* in front was a pronaos or portico extending along the whole width of the temple, the depth of which was half its extent. The cell or main body of the temple was 54¾ feet deep, and the sanctuary beyond 36½ feet. The height of the sanctuary was 36½ feet, the middle part or cell 54¾, and the portico 36½. The body of the temple was surrounded by three tiers of chambers, to which there was an ascent by stairs, and the central space was a court open to the sky. Bells were suspended about the temple, and were probably intended, by the sound they produced on being agitated by the wind, to keep off the birds from the consecrated

* Taking a cubit at 1·824 feet.

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edifice.* The ends of the beams of the upper floors rested on stone corbels, and were not inserted into the walls, which were lined with cedar, on which were figures of cherubim and sculptured palm-trees, covered with gilding: within the sanctuary were two figures of cherubim made of wood and covered with gold; these were 10 cubits high, and their expanded wings extended across the width of the temple.

In front of the portico were two pillars of brass, each 18 cubits high, and nearly 4 cubits in diameter. The chapiters or capitals, also of brass, were 5 cubits high; one was ornamented with lilies on a net-work ground, the other with pomegranates.

The 'house of the forest of Lebanon' seems in style to have been similar to the temple, but more extensive, being 100 cubits long by 50 cubits in breadth. From the proportion of the columns they must have borne considerable resemblance to the Egyptian or early Greek examples, as the height was only equal to five diameters; indeed, from the description given, as well as the fact of Phœnician workmen being employed, there is every reason to suppose that the temple was very similar to those of Egypt.

Persia was the seat of one of the most powerful empires of Asia from a very early period until the invasion of the country by Alexander the Great, 330 B. C., during which time the art of building must have been practised to a great extent; but in consequence of the invasions to which the empire was subjected, and the frequent internal commotions, which were doubtless accompanied with their usual devastations, nearly all the monuments of this celebrated and civilized nation have passed away, and, with the exception of the ruins that exist in one place, not a vestige of any ancient building remains. These ruins, situated in the great and fertile plain of Merdasht or Istaker, in the province of Farsistan, are all that is left to

* The like means are known to have been adopted on the roofs of the Grecian temples.

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mark the spot where the city of Persepolis once stood. This city, the ancient capital of the Persian kings, is supposed to have been built or embellished by Cambyses, or his successors, Darius and Xerxes, in the sixth century B. C.; but its prosperity must have been of short duration, for, with the other cities of the empire, it declined after the death of Alexander and the division of the territories he had conquered.

The ruins are supposed by Le Brun to be those of the palace of Darius that was destroyed by Alexander in one of his revels: the inequality of the ground, together with the appearance of distinct apartments for men and women, seem to favour the opinion that they formed part of a palace rather than a temple. The edifice has been founded on a marble rock, and extends 400 yards from north to south, and 200 yards from east to west.

The western platform is elevated 22 feet above the plain in front, and is ascended by flights of steps, which meet at the top. The two great masses of masonry, resembling those in front of the temples of Egypt,* diminish upwards, and are crowned by a hollow member. Their length is 22 feet, and their thickness 13 feet, but they vary from each other in height, that of the one being 39 feet, while the other measures only 29: on the sides are sculptured winged horses or bulls with human heads,† wearing Persian dresses: in these are doorways, which, no doubt, led to the front courts of the palace, the magnificence of which is attested by the number of broken columns which lie scattered about.

Beyond these ruins is another assemblage upon more elevated ground, apparently forming the principal part of the palace. This terrace is supported by walls on which are

* Le Brun, who visited these ruins in 1704, conceives, from their similarity to the works of Egypt, that they must have been derived from the same source, and that they are not many removes from one common parent.

† The sculpture of these very much resembles the figures lately discovered by Mr. Layard at Nimroud, and are probably of the same date.

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numerous sculptures, representing processions and sacrifices of horses and oxen: the figures wear the head-dress and robes worn by the Persians and Medes. The columns are of grey marble, from 70 to 72 feet in height, and 5¾ feet in diameter; each column has a base 4½ feet high, with sculptured mouldings; some of the columns are decorated with zig-zag ornaments, others have small scrolls at the top, and some of them are fluted, with fillets between the flutes.* These ruins possess great interest, from the number of groups of these large columns, which show the arrangement of the palace, the extensive staircases, many of which are 51 feet in width, and the remains of portals, windows, and sculpture, which are everywhere scattered around.

About two leagues from Persepolis are some excavations supposed to be the tombs of the early kings of Persia. The sculpture on the lower tombs show them to be the work of the Parthians.

No person can look at the style of composition and details of Persepolis without feeling the conviction that some intimate connection must have existed between the architects of Persia and those of Egypt, the principles of both being identical; indeed, according to Mr. J. Gwilt's opinion,† "there appears to be sufficient evidence to convince us that the arts travelled in every direction from some Asiatic point, and that the Egyptian style had its origin in Asia," though conjecture has assigned the erection of this stupendous palace to Egyptian captives at a comparatively late period, after the conquest of Egypt by Cambyses.‡ On one of the portals are arrow-headed characters, similar to those of Ancient Babylon.

A great resemblance exists between the present architecture

* Niebuhr and Sir R. K. Porter inform us that these buildings were of marble. No cement seems to have been used, but the blocks were connected by cramps. The joints are so well wrought as to be scarcely perceptible.

† Mr. J. Gwilt's 'Encyclopædia of Architecture,' page 22.

‡ B. C. 525.

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of Persia and other Mohammedan countries, and it therefore requires no description of its peculiarities.

CHAPTER VII.

THE ANCIENT ARCHITECTURE OF INDIA.

Of all the remains of ancient buildings that have attracted the curiosity or attention of the traveller devoted to antiquarian research, none have been investigated with less satisfaction, as regards their history or chronology, than those of India. No attempt at classification has been made until lately, doubtless in consequence of its difficulties; for it was quite impossible to form any conclusive opinion, without a careful examination of a considerable portion of the excavated and constructed monuments scattered over an immense country, and which in some places are difficult of access. All the information that we have hitherto obtained on this subject has been from picturesque views, or else from descriptions of particular caves or buildings hastily or imperfectly examined, and which throw little light on their origin.

This task, which required a thorough knowledge of architecture, and a careful study of the forms of religion, as well as of the earlier history of India, has been accomplished by Mr. James Fergusson, who visited the principal caves and temples in different parts of India, and with great industry and enthusiasm has collected a mass of information; for the publication of which, all must be grateful who are engaged or interested in the history of art.*

* Fergusson's 'Rock-cut Temples of India,' 1845; and 'Illustrations, with Descriptions, of the Ancient Architecture of Hindostan,' 1848. The following descriptions of the ancient buildings of India, and the conclusions as to their dates, are chiefly abridged from those contained in the above works, to which the reader is referred for a more careful study of these interesting monuments.

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An impression has generally prevailed, that the cave temples of India are of a date anterior to any existing remains of antiquity, with the exception of those of Mexico, which still remain unexplained; and that the arts of Persia and Egypt proceeded from India: whereas it has been clearly ascertained that Egypt had ceased to be a nation before the earliest of the cave temples were excavated; and if we except the copies of the earlier structures by the Ptolemies and Cæsars, there is nothing on the banks of the Nile which does not belong to a different and far more ancient epoch than anything in India.

The inference that the Persians derived their forms of architecture and ornaments from those of the temples of India, has been founded on the similarity of the capitals and columns of Persepolis to some of the Hindoo temples, which it has been supposed were built in an older style than that which prevailed at the time of their erection. Of this, however, there is no positive evidence; and, if the similarity is admitted, the more reasonable cause of it may be, that the Persians during their migrations or traffic with India imparted, to a certain extent, some of the ornamental features of their buildings; and this is confirmed by the date of the building of Persepolis, which took place more than ten centuries before the oldest structural temple at present existing in India.

The ancient monuments of India are of two kinds, the excavated and the structural; the one being cut out of the rocks, while the others are erected of different materials in the usual way. The former are the most ancient, and were made by the Buddhists, a sect whose earliest existence cannot be dated prior to the sixth century before the Christian era.*

* Brahminism was a religion which existed antecedently to Buddhism, and was much purer in its forms than the faith which is at present followed, bearing the same name, or that of Hindooism. It seems to have been Monotheism, with a mixture of elemental worship, and had resemblance to the fire worship of the ancient Persians; but image worship, or idolatry in any shape, was quite unknown. It is extremely doubtful whether they ever built temples, or made them a part of their system: it

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The founder Buddha is ascertained from the best authorities to have died in the year 543 B. C., though the trans-Himalayan chronologers concur in placing him about 500 years earlier.* Mr. Fergusson considers that there is no cave anterior to the middle of the third century B. C.

The caves consist of three classes: the first of these are the Vihara or monastery caves, the earliest of which are natural caverns slightly improved by art, appropriated to religious purposes: those which followed had a verandah opening into the cells for the abodes of the priests,† but without sanctuaries or images of any kind. The simplest form of these consists of merely one square cell with a porch, sometimes nearly 30 feet in length; in others the arrangement is extended by the verandah opening into a square hall, on three sides of which the cells are placed. Another subdivision of the Vihara caves consists in the enlargement of the hall, and the consequent necessity of the use of pillars.‡ In these, besides the cells, there was always a deep recess facing the entrance, in which the statue of Buddha, with his attendants, was usually placed;

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however is certain that no trace of any of their buildings now exists in India, nor is any description of them found in the works of native or foreign writers.

* Sakya Sinha, or Buddha (the sage), devoted himself to a life of ascetic contemplation and teaching, and died at the age of 80. His doctrines were reduced to writing; and 110 years after, a convocation was held at Nisali to settle disputed matters, but not until 300 years after his death was the faith firmly established in India: it was afterwards propagated nearly throughout the whole of India, China, Ceylon, and Japan. Though in its native country it has now ceased to exist, the number of its followers exceeds that of any other known religion, being computed at 315 millions.

† The Buddhist priesthood was taken from all classes, and congregated, under vows of celibacy, in monasteries. Nunneries were established for female devotees, in a manner resembling the ascetic Monachism that existed in Egypt and Syria in the earlier centuries of Christianity.

‡ The earliest caves were merely cells for the dwelling of an ascetic, which afterwards expanded into monasteries, and contained cells for a number to reside in.

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thus making the cave not only an abode for the priests, but a place of worship. To this division by far the greater number of Buddhist excavations belong: those at Ajunta are the finest, though good specimens exist at Ellora and Salsette.

The second class consists of Buddhist Chaitya caves: these must be considered as the temples or churches, and one or more of them is attached to every set of caves in the west of India: the plan and arrangement of them are exactly the same, though the details and sculpture vary with the age in which they were erected. These, unlike the Viharas, seem to have taken the same form at once, as is seen in that of Karli, which is the most perfect, and believed to be the oldest in India. It has been supposed from this circumstance that they were copies of the interiors of structural buildings, though no traces of such buildings exist in India, Ceylon, or beyond the Ganges. In all these caves there is an external porch, or music-gallery, and an internal gallery over the entrance; the centre part of the temple is surrounded by circular or octagonal pillars that divide it from the aisles, and are carried round the semicircular part at the farthest end, and which may be considered as an apsis: the whole bears a strong resemblance to the arrangement of the early Norman churches. The nave or centre part is twice its width, and is roofed by a waggon vault; the roof of the aisles is generally flat. In the centre of the semicircular part stands the Daghopa, in part of which there is always a sculptured niche containing a figure of Buddha and his attendants.* The third class consists of Brahminical caves, many of which have a great resemblance to the Vihara, though the arrangement of the pillars and the position of the sanctuary are in no instance the same. The walls are nearly always covered with sculpture, while the Viharas are generally decorated with painting and inscriptions. The finest specimens are at Elephanta and Ellora; others are to be found in the island of Salsette, near

* The Daghopa consists of a plain circular drum, surmounted by a hemispherical dome, and containing some sacred relic.

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Bombay.* The excavated temple at Elephanta is 130 feet long by 110 feet wide, and 14½ in height. The ceiling is flat, and supported by four rows of columns connected by a fascia, or simple architrave: the columns are 9 feet high, standing on pedestals: they are reeded or ribbed, and have projecting capitals of a semicircular form in profile, from which spring the brackets of the ceiling. Against the walls are sculptured colossal human figures in high relief, which differ from each other by a variety of symbols, representing the attributes of the deities whom they worshipped. At the farthest end there is a square recess, supposed to be the sanctuary; on either side of the doors by which it is entered there are large figures. Our space will not admit of more than a general description of these very interesting monuments, which are numerously scattered about; in some places they are in large numbers; those at Kannari are nearly 100, and consist of three stories cut out of the face of the rock: the excavated caves at Ajunta are at an altitude of 150 feet above the ravine in which they are situated.† It has been observed that the form of the arch was unknown, in a structural point, to the Buddhists, yet they nearly always adopted that form in their Chaitya temples, while in the Brahminical caves no such form exists, as the ceilings are invariably flat.

Besides these cave temples and Viharas, there is another distinct and curious class of excavations cut out of the rock, and which seem to be imitations of structural Brahminical temples; they are of one block of stone, though executed in a manner

* The cave temple at Elephanta is supposed to have been excavated in the tenth century of our era.

† In many of the caves there are remains of painting and inscriptions; but they cannot be depended on to regulate their dates, as the characters were often in an older style than that which prevailed at the time they were executed. In none of the caves excavated before the Christian era is there any image or symbol of worship found; but gradually, during the ten and eleven centuries that their religion extended, we find images of all kinds; first Buddha; afterwards of Bodisatwas, or inferior Buddhas; then saints of all kinds, male and female.

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to convey the impression that they are erected of jointed masonry. These temples, to which so much care has been given in their excavation, have the appearance of standing in pits, as all the surrounding parts have been cut away, and the present level of the ground is, of course, higher than the temples. The most remarkable of this class is the Kylas at Ellora, which is one of the most modern specimens of excavation in India, and can scarcely be considered earlier than the tenth century, A.D. The whole extent of this excavation is 401 feet long by 247 feet wide, and is at the north-east angle 104 feet deep; round the sides of this area is a cloister supported on square pillars, which are covered with subjects from the Indian mythology. The centre part is occupied with the entrance pavilion, the chapel of Nandi, and the grand temple and sanctuary, round which are balconies supposed to have been used by the musicians on solemn occasions. The approach to it is by a bridge, from which you descend to the chapel by nine steps; and, passing on over another bridge, you arrive at staircases on each side, which lead to the inner court, the temple, and cloisters. On each side of the bridge are gigantic representations of elephants, and beyond are two richly-carved pillars or obelisks. It is with regret that we are compelled to curtail our description of this wonderful monument, which appears to impress all who see it with feelings of something more than admiration: this is not caused by its height, its forms, the regularity of its lines, or the profuse number of ornaments and enrichments with which it is covered, but by its great peculiarity of situation, and which conveys an impression of its originating from superhuman efforts. The suddenness with which it opens to the view may account for the feeling; being so much below the level of the ground, it is not visible until within a few yards of it.*

To trace chronologically the history of the constructive

* For further description, see 6th vol. 'Asiatic Researches,' by Sir C. Malet; 'Tracts of the Literary Society of Bombay;' Capt. Sykes's 'Memoir;' and 'The Wonders of Ellora,' by J. B. Seely, 1825.

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buildings of Hindostan is a matter of greater difficulty than that of the caves that preceded them, in which there is a visible progression from their originals, the natural caverns. There is no characteristic which can be produced with certainty of all the styles of architecture of Hindostan, except the melancholy one, that their history is written in decay; for wherever we meet with two buildings, or two specimens of art of any sort, in the whole country between Cape Comorin and the Himalayas, if the one is more perfect or of a higher class than the other, we may at once feel certain that it is also the more ancient of the two; and it only requires sufficient familiarity with the rate of downward progress to be enabled to use it as a graduated scale, by which to measure the time that must have elapsed before the more perfect could have sunk into the more debased specimen.

The absence of the arch in all constructions of every age is general throughout India, as the principle was quite unknown. This is observable in a pointed arch at Kutub, near Delhi (built A.D. 1210 to 1235), of 22 feet in diameter by 60 feet in height, constructed in horizontal courses, which it would not have been, had more scientific principles been known. This inconvenience must have been great to a people who in their ornamental buildings employed stone roofs; they were therefore compelled to resort to the bracket principle, to supply its place.

The upper parts of the buildings were supported on square piers or pillars, and from all sides of their capitals brackets projected equal to their width, and leaving generally a space equal to three diameters between their greatest projection, thus leaving only one-half of the whole length of the architrave unsupported; but when a greater space was required, a succession of projecting brackets placed above each other was adopted, sometimes meeting in the centre, thus having the effect of a horizontal arch. The effect of this is undoubtedly pleasing, as the projecting brackets on all the sides of the square capital produce in perspective a variety of lines, and great play of light and shade.

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One of the oldest structural monuments or temples is that of Bobaneswar, which is 60 feet square at the base and 180 feet in height, built about the middle of the seventh century,* and in a style of art for which it is extremely difficult to find explanatory terms, the details being so far removed from all the ordinary forms of architecture. There can be little doubt but that great and progressive changes must have occurred before building could have arrived at the forms that are here developed, but at what period or from what sources their impressions were derived is at present a mystery.†

In plan, the Indian temples or pagodas are square: the only light that is admitted is by the door: the gloom of their caverns was followed, and solemn darkness seems to have been considered as necessary to the sacredness of the building. Temples were frequently placed in groups: those at Barelli are the most perfect of their age, and are covered with the most elaborate detail; in size they give place to those of Cuttack: the date given by Colonel Todd is somewhere between the eighth and tenth centuries of our era.

One of the largest of the Hindoo temples is that at Chillambaram, on the Coromandel coast, which from its dimensions and antiquity is held in high veneration. This cluster of pagodas is enclosed in a rectangular space of 1332 feet in length by 936 in width, by walls 30 feet in height. This area contains a variety of temples, much decorated with sculpture of figures and ornaments, more curious than beautiful: these are connected by extensive colonnades and porticoes.

* About the same date as the pillars in the Mokemdra Pass. Pillars and obelisks occur frequently in India: they were set up for the purpose of receiving inscriptions or records of native offerings and gifts to temples: six of them set up by Asoka about 240 years B. C. are still known to exist.

† The Mohammedan invasions took place in the eleventh and thirteenth centuries; therefore the art of decoration cannot have been influenced by these events: besides, some very elaborate temples exist in the most southern parts of India, far removed from the scene of conquest, and therefore not likely to have been erected in any foreign style.

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Pyramids stand over the entrances of the outer enclosures, and consist of several floors. Other pagodas of very large dimensions exist at Tanjore, on the island of Seringham, near Trichinopoly, and at Madurah; but our limits will not permit us to extend this section for any observations on them:

Among the interesting works of the Hindoos are the Bunds or dams, which are made for the purpose of intercepting the course of small rivers, so as to form an artificial lake for the purpose of irrigation: on these dams, which are constructed of stone, palaces and temples are generally placed, and between them are very broad flights of steps leading down to the water, which are ornamented frequently with figures of elephants, and were used as fountains. That at Raj-Sing, at Oddypore, is 376 paces in length, and was built in 1653.

In concluding this interesting subject, we have to remark, that nothing can be more erroneous than to compare the architecture of India with that of Egypt, or even with classic styles, to which there is not the slightest resemblance or ornamental affinity. The essential principles of their composition and sculpture are totally different: in that of Egypt the chief character is the uninterrupted solidity of the masses, to which the enrichment is subservient; whereas in that of India the principal form is lost in the perplexity of the ornaments, which so completely preponderate as to destroy the scale, and project without any consideration to the general effect. In the former, even the smallest edifices are grand; whereas in the latter the unmeaning subdivision of its parts gives an air of littleness to those of the largest dimensions: there can scarcely be a greater contrast than the extreme solidity of the one with the total absence of its appearance in the other.

The Indian styles, whatever their defects may be, have at least the merit of being original; for there can be little doubt but that they were invented in the country where we find them.

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CHAPTER VIII.

CHINESE ARCHITECTURE.

THE architecture of China, unlike that of other nations, has retained its particular character during all times without any mutation, and uninfluenced by that of other countries. Their native historians ascribe the origin of building to their Emperor Fou-Hi, who first taught his subjects that art about 368 B.C.: however, there does not exist any building of that date, probably from their being generally constructed of wood. Besides, in the year 246 A.D. the Emperor Tsin-Chi-Hoang-Ti demolished all the existing buildings of importance, so as to remove all records of the grandeur and power of his predecessors: beyond a few temples and tombs in the mountains, which are supposed to be of a prior date, nothing remains of a higher antiquity.

The type of all Chinese buildings, whether they are used for the purposes of religion or as residences, is undoubtedly a tent; and the convex form of their roofs shows that they are a copy of those made of more pliant materials, sustained at different points from brackets at the top of vertical supports. The material generally employed is wood; that most in use is the nan-mon, which is said to last more than a thousand years: stone, marble, bricks, bamboo, and porcelain tiles, are also used.

In all other countries, however strong their prejudices may have been in favour of their peculiar or natural style of architecture, yet still we find proofs of a continuous current of invention and visible steps of improvement, both in the constructive and decorative portions of their buildings. In other parts of Asia, where bigotry to religion existed, and its natural attendant, the greatest veneration for the edifices devoted to its rites, still in all their caves and temples we find progressive changes towards a more elaborate or impressive class of monuments. In China, on the contrary, a totally different feeling

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prevails, and improvement seems to have been considered an innovation and direct breach of the laws, which are looked upon as something more than human ordinances, from their supposed perfection and antiquity.

One great hindrance to any advance in architecture is caused by the construction of their private houses and public buildings being subject to the restrictions of public functionaries (who may be properly designated district surveyors), backed by most arbitrary laws: under their supervision every one is obliged to build according to his rank, and for every house a certain size as well as details are fixed. These officers seem to govern the arts in China, and the laws regulate the magnitude and arrangement of residences of the various degrees,—for a noble family, for a president of a tribune, for a mandarin, and for all classes who can afford the luxury of a house. The size of public buildings likewise comes under their management. The merchant, whatever the amount of his wealth may be, is compelled by this regulation to restrict the dimensions and decorations of his house to his exact grade or standing: this refers only to the external part of his dwelling; the interior arrangements are unfettered. According to these prohibitions (for they cannot be considered in any other light), the level of the ground floor, the length of the frontage of the building, and the height of the roofs, are in an advancing scale from the citizen to the emperor, and their limits must be attended to without appeal.

The buildings generally are only of one story; and in Pekin the shopkeepers are obliged to sleep under their pent-houses in the open air in summer. One reason perhaps justifies their houses generally being only of one story, which is the slightness of their construction, and which renders them incapable of bearing anything above them. The general character and arrangement of the Chinese houses is so well understood, that no object will be gained by enlarging on the subject. In every part, nothing is seen but a succession of combinations of frame-work and trellises painted in all the primitive colours,

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which has caused the impression that the Chinese houses bear a greater affinity to bird-cages than to anything under the sun: the form of some of their doors is sometimes circular or octagonal, and tends to strengthen them, as in no other country are apertures of that form used for entrances.

The palaces resemble a number of tents united; and the highest pagodas are nothing else than a succession of them piled on one another, instead of side by side: in short, from the smallest village to the imperial residence at Pekin, no other form but that of a permanent encampment prevails. Lord Macartney, who travelled the whole empire from the farthest part of the great wall to Canton, observed that there was but very little variation in the buildings to be seen.

Amidst the substantial works of the Chinese the most remarkable are the bridges: that at Loyau, in the province of Fod-Kien, is composed of 250 piers built with very large stones, which support enormous granite lintels, or stones placed horizontally; these are crowned by a balustrade. A considerable number of bridges have been constructed in China, and they are considered to be works of great magnitude and importance. To the Chinese is attributed the earliest application of the suspension bridge, which has been so much adopted in modern times in situations where no other means of passage could have been applied.

The temples of the Chinese are generally small, and consist of only one chamber, which is the sanctuary of their idols; on the outside is a gallery: others stand in a court surrounded by corridors. In some instances the interior is spacious: that at Ho-Nang, near Canton, is 590 feet in length by 250 in width; the temple is constructed of wood, and covered with painted and varnished porcelain. It has been estimated that Pekin and its environs contain nearly 10,000 mido or idol temples, some of which are superior in decoration to those at Canton.

Amongst the buildings that are peculiar to China are the pagodas, or towers of from six to ten stories, diminishing

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upwards: the projecting top of each story presents the concave form before referred to; and the plan of these buildings is generally an octagon. The most celebrated is that of Nang-King, which is called 'the tower of porcelain;' it is 40 feet in diameter at the base and 200 feet in height; in the centre is a staircase connecting each stage, and which is lighted by windows on four sides; the openings do not occur over each other, but in alternate stories: the whole is cased with porcelain. The age of this pagoda is little more than three centuries.

Commemorative buildings and triumphal arches or doors are very numerous throughout China: they are placed at the entrances of streets as well as before principal buildings; the better class of which consist of a central and two side openings: the lower part is generally of stone, without any mouldings; the upper part is of wood, and supported on horizontal lintels, the constructive arch being as little known in China as in other Eastern nations.

The great wall, which extends for 1500 miles, has perhaps caused a much higher opinion to be formed of the monuments of the Chinese than a careful survey justifies. It is (with an exception in favour of their bridges) the only work of any importance that can give the Chinese any position as a constructive people.* It consists of an earthen mound faced by walls of brick and masonry; its total height is 20 feet. The platform on the top is 15 feet broad, and increases to 25 feet

* From the architecture as well as the ornamental works, the impression is conveyed that mechanical skill and imitation are the only faculties that are possessed by the Chinese, as their arts seem to be confined to servile copies of the works of Nature, without any feeling of composition or invention. The ancient people must indeed have been widely different in their composition, as they have credit for the discovery of the magnetic compass before 121 A. D.; the art of printing in the tenth century; the earliest manufacture of silk and porcelain; and last, though not least, the composition of gunpowder, which their descendants of the present day use to so little purpose.

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at the base of the wall; at intervals of 200 paces are towers of 40 feet square, which diminish to 30 feet at the top; their height in some places is 37 feet, in others 48. This wall, which commences in the sea to the east of Pekin, extends along the frontiers of their provinces, over rivers, mountains, villages, and often in places that are of themselves sufficient protections from any hostile invasion: it engaged million of persons for ten years in its erection.*

CHAPTER IX.

ARABIAN, SARACENIC, OR MOORISH ARCHITECTURE.

In consequence of the very few examples remaining, we have little evidence of the ancient architecture of the Arabians. The Caaba at Mecca is the only temple existing in which the Arabians worshipped their idols; this, however, was much repaired by Mohammed, and it is extremely difficult to trace the portions of the prior erections. Since the death of the Prophet, the veneration in which it has been held has preserved it from material alteration, in consequence of its containing his tomb.

From the appearance of Mohammed, in the seventh century,† may be dated the commencement of a style of architec-

* The first emperor of the Tsin dynasty caused this wall to be built as a protection against the Tartars, though it has been supposed that the employment of a large mass of people, who were in a state of excitement at his tyranny, was the more direct cause of its erection, or it would not have been carried over places that were quite inaccessible to an enemy, and therefore in these situations useless. It has now stood nearly sixteen hundred years. He ordered all the books of the learned, including the writings of Confucius, to be cast into the flames, for the same reason that caused the destruction of all the principal existing buildings.

† Mohammed was born in A. D. 570, and died in 632. It was not until 610 that he assumed the name of the Prophet. His flight from

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ture which extended from the Indus along the northern coasts of Africa, and to a considerable portion of Spain. In the latter country it attained its greatest excellence; and it is remarkable that the most splendid specimens of Arabian arts should be found so far from the seat of their government.

There is every reason to suppose that the Arabians were indebted to their Egyptian or Babylonian neighbours for the forms of architecture that were adopted in their temples prior to the time of Mohammed. Their unsettled habits were a hindrance to improvement in their mode of building beyond what their requirements induced. Their extensive conquests under Mohammed and the succeeding caliphs brought them in contact with nations more civilized than themselves, and from whom they acquired a knowledge of the arts and sciences.

The mosque which was built at Jerusalem by Omar, the second caliph, about A. D. 640, is supposed to have been the first of their erections beyond the limits of Arabia. Of the nature of this edifice we are ignorant, in consequence of the numerous additions made to it at subsequent periods.* When Damascus became the seat of the empire, it was considerably improved; and among its splendid buildings was the celebrated mosque founded by Alwalid II. In the year A. D. 762, the foundations of Bagdad were laid; and this city remained the imperial seat for 500 years. The magnificence of the palace of the caliphs could only be exceeded by that of the Persian kings; and the pious and charitable works of those days have

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Mecca, on the 16th of July, 622, has become the era from which his followers count their years; and his precepts are observed from the Ganges to the Atlantic by more than 120 millions of people.

* The mosque of Omar is considered by the Mohammedans as next in sanctity to that at Mecca. For an account of it, see Fergusson's 'Temple of Jerusalem,' and 'Itinéraire à Jérusalem,' by Chateaubriand. The whole is contained in a quadrangular area of 500 paces long and 460 paces wide, surrounded by walls in which there are twelve entrances. The edifices within the enclosure consist of two temples, or mosques, respectively called El Achsa and El Sachara.

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never been equalled, as water cisterns and caravanseras were built along several hundred miles of road.

It is surprising that so few public buildings remain, when we consider the extent of the dominions acquired by the Arabians after the establishment of the religion of Mohammed, the magnificence of the cities of Cairo and Bagdad, and the patronage bestowed on men of science by their caliphs. This scarcity of their earliest buildings can hardly be attributed to any devastations caused by wars in the eastern part of their dominions; for, with the exception of the crusaders, whose conquests, and consequent destruction of religious edifices, did not extend beyond the sea-coasts of Syria, all other invaders of the Saracen empire were men of the same faith, and would have considered the public edifices as property common to all the moslems, and have retained them for their original purpose.

Nearly all that remains of the ancient architecture of the Eastern Saracens are the mosques at Mecca and Jerusalem: to these may be added the castle of Cairo, and the ruins of the hall of Joseph; although both the latter are supposed to be the works of Saladin in the latter part of the twelfth century.

The architecture of Byzantium, as we have already shown, was the groundwork from which all new styles sprung up in Italy; and its development was the basis of all modern art. The Saracenic styles of architecture proceeded from the same source as that practised in the western parts of Europe, and hence the similarity that has caused the supposition that the pointed form was actually taken from the Eastern nations, instead of its resulting from alterations which have always marked the progress of art.

The most splendid specimens of Arabian or Saracenic architecture are to be found in Spain, of which the most ancient is the mosque at Cordova, begun in A. D. 780 by Abd-el-rahman, then king of this part of the Moorish dominions. The style of this building was, without doubt, copied from those then existing in the East, as it was erected within the first century

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after the Moors had established themselves in Spain.* It is an insulated parallelogram of 620 feet in length by 420 feet in breadth, and is divided into two parts; one of them is an open court, in which worshippers performed their ablutions before entering into the body of the temple: on three sides there is a colonnade 25 feet wide, and on the other are the several doors communicating with the mosque. This consists of nineteen naves divided by seventeen rows of columns: thus the interior presents an appearance of a forest of columns composed of jasper and other marbles; they are 18 inches in diameter, and surmounted by capitals which bear a strong resemblance to the Corinthian and Composite orders;† these are connected by segmental arches. The ceilings are of wood, painted; the enrichments are of stucco, also painted in various colours, decorated with legends, and occasionally gilt. After the conquest of the city by San Ferdinand, in 1238, the mosque was converted into a cathedral; and the character has since been greatly injured by erections that were necessary for its adaptation to the service of the Christian religion.

The most perfect example existing, that can convey an idea of the extent to which sumptuousness of ornament and enrichment can be carried, is to be found in the Alhambra, the residence of the Moorish kings of Granada, erected between the years A.D. 1240 and 1348. In this there are no traces of art peculiar to any other nation; the composition and distribution of the ornaments being arranged with consummate skill. To

* The Moors, under Mùsa Ibn Nosseyr, the viceroy of the northern part of Africa, landed in the south of Spain A.D. 711, A.H. 89; and within two months, Cordova, Granada, Jaen, Malaga, and Toledo, then the capital of Spain, were reduced, or opened their gates to the conquerors. The mosque of Cordova was finished by Hishám, A.D. 794.

† These were probably obtained from some Roman buildings that existed in the neighbourhood, as some of them have bases, so as to bring them to the required height, while others, which were too short, were lengthened by giving them tall capitals. In this building there are upwards of 900 columns.

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attempt a short description of this model of pure Arabian architecture would only be an injustice to it, as no notion would thereby be conveyed of this extraordinary work; we therefore can only remark, that every part of the walls and ceilings is covered with a mass of ornament enriched with gold and the most brilliant colours, and which bears the strongest evidence of the high degree of refinement and luxury at which the Moors had arrived prior to their overthrow.* The whole of the ornaments are composed of stucco; and it has been observed, that no nation has constructed so many magnificent buildings without having recourse to the quarry.

Moorish architecture has several kinds of arches: the horse-shoe form, having the centre raised above the spring of the curve, which diminishes in width; the pointed arch, in which, likewise, the greatest width is above the impost or spring from which the curve commences. Some of these latter arches contain on the inside a succession of small cusps of a segmental form. The next example is that of the cuspid arch, strictly so termed, the outline being produced by intersecting semicircles, very similar to the trefoil heads of Gothic windows, with the exception that they are not circumscribed by a continuous arch. Arches of this kind occur in the sanctuary of the great mosque at Cordova, where they rest upon columns. Another example, very unlike the preceding, is in the Court of Lions in the Alhambra, it being circular-headed and stilted, and considerably more than a semicircle: the part below the centre of the curve is vertical, and rests on small corbels that are fixed against panels wider than the slender pillars that support them.

The style is noted for the extremely slender proportions of its pillars, and for the fancy and diversity of invention shown in the devices of mosaics and pavements, many of which appear exceedingly elaborate, although, when analyzed, they

* For a full description, with views and the details represented in their original colours, the reader is referred to the work published by Mr. Owen Jones, which is truly worthy of the magnificence that it illustrates.

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are found to be very simple in principle: some patterns, exhibiting octagons, stars, and other figures, are produced merely by a series of zig-zag lines intersecting each other at right angles; and different combinations are formed by turning the points in a contrary direction.

Amongst other features of this style is the honeycomb, fret-work, or pendents, which compose the ceilings of the buildings of the later dates, of which it is impossible to convey a notion without illustrations: in short, it is a cone-shaped covering, but ornated with a multiplicity of projecting forms, which render its first appearance perplexing; but, like the mosaics, it is extremely simple in principle. This is a style that, with all its beauties, scarcely admits of a revival in its original forms, except in detached portions, on account of the prodigality of its enrichments and colour, which, if simplified, would rob it of its great attraction. The ornaments, though very conventional, are so beautifully combined as to be copied or studied with great advantage by those who study the art of decoration.

CHAPTER X.

DRUIDICAL, CELTIC, AND ANGLO-ROMAN ARCHITECTURE.

In an inquiry like the present, intended to trace the origin of the arts in this country, it will only be necessary to take a cursory view of the earlier monuments of antiquity which still exist in different parts of Great Britain, without entertaining theories respecting their origin, from which no satisfactory conclusions can be arrived at, and which had no influence on buildings erected long after, when their purpose was but imperfectly known, and the religion from which they sprung had passed away.

The earliest remains of a structural nature are the unhewn

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stones which, in various forms, are found in different parts of the island. The introduction of those in the southern parts is chiefly attributed to the Phœnicians, or Canaanites of Tyre and Sidon, who were the most expert sailors of antiquity, and maintained a commerce with the southern parts of England.

It seems unquestionable but that their frequent adventurous voyages suggested the idea of planting a colony in this part of Britain, and that they then introduced the custom of erecting gigantic stones, which had been a practice in Asia from the earliest periods. These erections are varied, and may be classed as follows: 1, the single stone, or obelisk; 2, circles of stones of different numbers; 3, sacrificial stones; 4, cromlechs and cairns; 5, logan stones; 6, tolmen, or colossal stones.

The most remarkable of these monuments, both for its preservation and arrangement, is Stonehenge, on Salisbury Plain, in Wiltshire, which has been generally considered as a Druidical and Celtic work. It consists of concentric circles of large stones, placed upright in the ground like pillars, with another large stone resting upon them as an architrave or lintel, which is secured by mortises and tenons; thus indicating a regular principle of construction, although the stones themselves are not squared. The remains at Avebury, near Silbury Hill, are merely rude masses of stonework in the form of a circle, with smaller detached circles of stones within its area. The other classes are chiefly of unhewn stones in different positions, and are only interesting in an antiquarian point of view.

The earliest habitations of the Britons were of a circular form, and composed of wicker filled in with clay, and sometimes placed upon foundations of stone, although caves were much used at the same time. The very rude nature of their abodes must tend to convince us that their mechanical knowledge had considerably fallen off, if the works at Stonehenge were executed by them.

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From the invasion of Julius Cæsar, in the year 55 B. C., may be dated the erection of solid buildings; for very shortly afterwards the Romans formed settlements and permanent stations, and erected temples, theatres, and public edifices within their walls. After the second invasion under Claudius, 44 A. D., the Britons learned the art of erecting substantial buildings, and were further encouraged by Agricola, who used every means to civilize and draw them from their former roaming and unsettled life to one more conducive to their comfort, and rendered them every assistance in erecting houses and public buildings. From the year 85 A. D. to the fourth century, architecture and the arts connected with it flourished greatly, and the same taste was introduced into Britain for convenient and ornamental buildings that had long prevailed in Italy. To the Romans may be justly attributed the conversion of this country from comparative barbarism; for every colony and city that they founded was adorned with palaces, halls, basilicæ, aqueducts, and other works, either for use or ornament.

These stations abounded throughout the country, and, engaging a large number of people, infused a spirit for building; and in the third century this island was celebrated for the number and skill of its artificers, some of whom went to Gaul to assist in similar works.

As the advent of the Romans to Britain was the period from which the knowledge of the arts and architecture commenced, so to their departure, in 410 A. D., may be attributed their sudden decline. It must, however, be admitted that for more than a century previous to this, their skill and arts of design had been gradually retrograding,—their uncertain position in this country, combined with the difficulties they experienced in resisting the opposing nations, rendered them negligent of the arts of peace, and careless of the style in which their buildings were erected or repaired.

Although the structures of the Romans, during their stay in Britain, were works on which great skill and industry were ex-

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pended, and were of a very ornamental character, yet from the numerous vestiges of architecture that remain, we cannot consider them as good examples for study, or at all worthy to be compared with the best works that existed in the parent state; indeed it can hardly be imagined that the edifices of a colony so far removed, and chiefly executed by people unused to building, could in any way cope with those on which the best talent of the period was engaged.

CHAPTER XI.

ANGLO-SAXON ARCHITECTURE.

THE little that remained of the art of building in the island was extinguished very shortly after the arrival of the Saxons in 449 A. D., as they, like the inhabitants of the other parts of Germany, were totally ignorant of all civilized modes of living, being accustomed only to dwell in hovels, built in the rudest manner with branches of trees and reeds: all knowledge of building, therefore, seems to have been lost for nearly two centuries afterwards. The idolatrous creed of the Saxons appears to have possessed no incentive to improvement in building temples; indeed, we find that, in 652 A. D., when the Christian religion had taken root, the churches were mostly built of wood and covered with reeds, which practice continued for some time afterwards.* The church built at Lindisfarne, or Holy Island, and also that at York, in which King Edwin was baptized, in 627 A. D., were built of timber, and the only parts composed of stone were the altars.†

* St. Augustin, who came to Britain in 597 A. D., found many of the heathen temples, which had been left by the Romans and afterwards used by the Saxons, still in existence: those which were substantially built, Gregory ordered to be consecrated and converted to the Christian service. —Bede's 'Historia Ecclesiastica.'

† Poole's 'Ecclesiastical Architecture of England,' p. 30.

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Paulinus, the instructor to Edwin, and first Bishop of York, is said to have erected the earliest churches of stone, as, on the authority of Bede, he "rebuilt that of York, and built at Lincoln a stone church of beautiful workmanship."

It was not until the latter part of the 7th century that the art of building in stone was again practised in England. This has been attributed to the exertions of Wilfred, Bishop of York, who erected churches at Ripon and Hexham, which were the admiration of the age: that at the latter place obtained great celebrity. Bishop Hiscop seems to have been equally energetic and devoted to raising buildings worthy of their purpose as for the erection of the monasteries of Weremouth and Jarrow.* He collected masons from France to build after the Roman manner, whereof he was a great admirer; he likewise sent for manufacturers of glass, who were not at that time to be found in England. His agents were successful, having induced several artizans to accompany them. These not only executed the work assigned to them, but gave instructions to the English in the art of making glass for windows, lamps, and other uses.†

The numerous ecclesiastical and monastic buildings that sprung up in the latter part of the seventh as well as the three following centuries, were "built after the Roman manner," or in the debased Roman style which prevailed at that period throughout Germany and France, and has received the title of Anglo-Saxon. The continued internal wars, as well as the repeated incursions of the Danes, who everywhere plundered and burnt, must have tended considerably to retard advances in the arts of building. The destruction of the numerous edifices, which were magnificent for that period, and had been erected at great cost, must have given little encouragement to those pious donations, from which had arisen the churches and monasteries so numerously distributed throughout the country.

* Weremouth was founded 674 A. D., and Jarrow 684 A. D.

† Vide Bede.

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On the authority of ancient records, as well as from the few existing examples, it appears that the plans of the Anglo-Saxon churches differed considerably, and must have been regulated by their size. The ancient church of Abbendon is described as a building of 120 feet long, with circular recesses both at the eastern and western ends.* The cathedral of Hexham in Northumberland, erected in the 7th century, was "furnished with a central tower; from this proceeded four aisles, or four arms of a cross; it had deep crypts and oratories, with passages under the ground. The walls were of great length and height, and were divided into three tiers, supported by columns both square and circular, which, as well as the walls and the arch of the sanctuary, were of stone, decorated with images in relief, and painted of various colours. The body of the church was surrounded by aisles and chapels of exquisite workmanship: the galleries above were so disposed that persons might pass round the church without being seen by any one in the nave below." † The Saxon church at Hexham was, according to Eddius, superior in magnificence to any on this side of the Alps.

The account of the rebuilding of York cathedral, in A. D. 767, by Alcuin, one of the architects, describes it as "having pillars, arches, vaulted roofs, porticoes, galleries, and altars:" these are sufficient indications that architecture must have been cultivated and brought to a considerable degree of perfection at a time prior to the invasion of the Danes.

The abbey of Ramsey in Huntingdonshire, which was rebuilt in A. D. 974, is described as having two towers, one at the western end, and the other in the middle of the building, supported by four pillars and connected by arches: these extended to other adjoining arches, to prevent the former giving way.‡ This shows that the plan of the building must

* Monast. Angl.

† 'Tractatus de Statu et Episcopis Hagustaldensis Ecclesiæ,' by Richard, the prior of the cathedral.

‡ Hist. Ramesiensis.

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have been cruciform, with side aisles, and somewhat similar to that of the cathedral at Hexham.

The Anglo-Saxon builders used to construct crypts beneath their most celebrated churches; those at Ripon, Hexham, York, and several of the Norman cathedrals, retain portions of the ancient crypts. Beneath the chancel of Repton church, Derbyshire, is perhaps the most perfect specimen of a crypt in the Anglo-Saxon style, with a vaulted roof supported by four piers of singular character, with a spiral band round each, and also the entasis, exhibiting the swell peculiar to the baluster shafts of the belfry windows of that period.* The buildings here noticed were some of the most celebrated, and therefore very elaborate in plan and arrangement. In the smaller churches the plans were extremely simple, and of an oblong form, the total length of which varied from three to four times the breadth, with the semicircular apsis at the east end. At rather more than half the entire length was placed the tower, which separated the nave from the chancel. In the earliest churches there were no towers, and the bells were suspended under stone arches and weatherings, above the western entrance. The towers of the Anglo-Saxon churches were generally placed at the west end, examples of which arrangement exist at Barton-upon-Humber, Lincolnshire; Brigsworth and Earl's Barton, in Northamptonshire. The latter more particularly is entitled to notice, from its possessing peculiarities of construction which clearly denote its being the work of the Anglo-Saxons, as they are nowhere found in the works of the Normans. The execution of this tower seems to bear a greater similarity to a timber than a stone erection: beyond the face of the walls, long thin stones project, placed vertically at nearly equal distances, which continue from one horizontal course or story to another, and in the spaces between are semicircular and diagonal pieces, which give it a greater similarity to wood quartering. The quoins are of the description of masonry which is always identi-

* Bloxam's 'Gothic Architecture.'

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fied with the Anglo-Saxon style, and called long and short work, from their being arranged with stones of equal size, placed alternately in a vertical and horizontal position upon each other, thus bearing resemblance to debased rustic-work.

The walls of the tower of St. Peter's church, Barton-upon-Humber, are built in a similar manner to those just described, of rubble stone and grout, interspersed with a sort of frame-work of projecting freestone in compartments, and encasing the doors and windows. The openings of the windows in the upper story are covered by two stones, inclining together without any curvature.

The heads of the doorways of the Anglo-Saxon style are either triangular-arched or semicircular; the latter were more generally used, and those which are more ancient were constructed of large flat bricks or tiles placed on end, and the spaces between, which are nearly equal to them in width, filled in with coarse rubble-work; the jambs or imposts of the arches were generally of stone. The mode of forming these arches, as well as the walls in which tiles were introduced, either in horizontal layers or arranged herring-bone fashion, was undoubtedly copied from the later works of the Romans: one of the most perfect specimens of this kind of construction is to be found in the church at Brigsworth in Northamptonshire, which is undoubtedly one of the earliest erections of the Anglo-Saxons at present existing.

The triangular-arched head is of a later date, and possesses little constructive merit; the extreme of the triangle rests on a plain abacus, the impost in some cases projecting from the wall: instances of this kind of arch are to be seen at the churches of Barnack; at Barton-upon-Humber, Lincolnshire; and at the tower of Brigstock church, Northamptonshire. Arches similar in form are known to have been used for decoration in the earliest variations of Roman architecture, and may be seen on several sarcophagi in the catacombs of Rome.

To enumerate the several churches that retain traces of this style of building would be only to occupy space that for our

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object may be engaged more usefully; as it must be borne in mind that we do not attempt more than such general descriptions of buildings as may serve to assist our history of the various styles of architecture, and exemplify the numerous and gradual changes that have taken place in this art at different periods, and trace them, as far as possible, to their sources.

The prevailing character of the Anglo-Saxon style is massiveness, with only the occasional introduction of a moulding, which in most cases consists simply of a square-faced projection with a chamfer or splay on the upper or lower edge: the sculpture of that period was extremely rude, and rarely introduced.

The constant invasions of the Danes, and the consequent plunder and destruction of religious edifices, lasted until the country was totally conquered by Sweyn, in A.D. 1012; but it can scarcely be considered that the ecclesiastics felt themselves sufficiently secure to commence the work of reconstruction before the accession of Canute, in A.D. 1017, to the sovereignty of this realm. In the course of his reign, which lasted twenty-nine years, the churches that had been left in ruins were rebuilt, and many monasteries were founded: that at Bury, in honour of St. Edmund, is attributed solely to the piety of this prince.* After the deaths of Harold the First and Hardicanute, the sons of Canute, Edward the Confessor ascended the throne, who, in the course of a quiet reign, was a great benefactor to the monasteries that were rapidly springing up in every part of England. The abbey church at Westminster was rebuilt by him A.D. 1065, and is described as "having been designed and constructed in a novel style of architecture, and as furnishing an example from which many churches were subsequently built." †

* "Over the body of the most holy Edmund, whom the Danes of former times had killed, he built a church with princely magnificence, applied to it an abbot and monks, and conferred on it many large estates." —William of Malmsbury de Gestis Regum Anglorum, p. 41.

† Matthew Paris and William of Malmsbury

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The church erected at Westminster by Edward the Confessor must in all probability have partaken of the style of architecture that was then practised in Normandy, as the art of building in that country was far in advance of that which prevailed in England at the same time. The long residence of this prince among the Normans doubtless gave him a prejudice in favour of their modes of construction, and caused him to bring over a great number of the workmen who were engaged in numerous large edifices in the southern and middle counties, which, by their dates being anterior to the Conquest, have been erroneously classed under the head of Anglo-Saxon; whereas, in fact, they are Anglo-Norman in style: want of space, however, hinders our giving a description of the churches to which these observations apply.

CHAPTER XII.

ANGLO-NORMAN STYLE.

It has been usual to commence the successive history of the art of architecture in England from the date of the Conquest by William of Normandy, in 1066: we shall therefore pursue the same course, as from that period architecture received an impulse unknown before in this country, and continued unchecked for more than four centuries, from which gradually sprung up those styles of building in which not the least vestige of their origin was perceptible. After the arrival of the Normans, and the establishment of William the Conqueror upon the throne, monasteries and churches were rapidly built in 'the new style' in almost every city and town; and within seventy years from the accession of Canute, in 1017, the number of churches had so increased, that on the compilation of the Doomsday Book, one thousand seven hundred were recorded in that survey as being then in existence.*

* Bloxam's 'Gothic Architecture,' p. 75.

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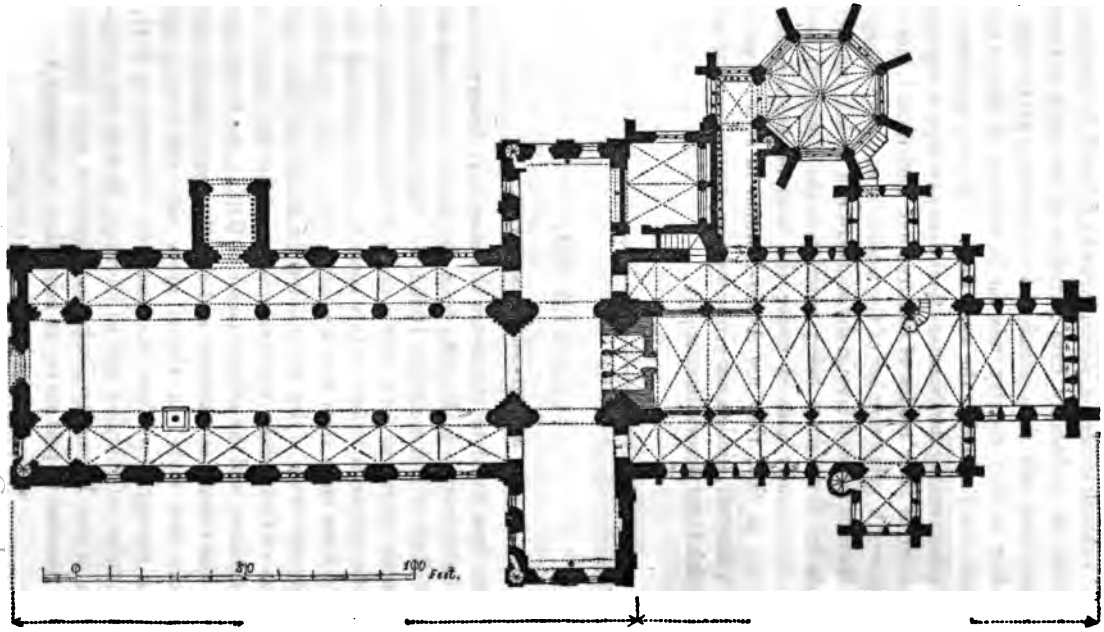

Plan of Southwell Church.—P. 78.

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Southwell Church.—P. 79.

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Southwell was distinguished at a remote period by the establishment of one of the three primitive Christian churches in England; namely, at York, Lincoln, and Southwell. (See pages 78, 79, 84.)

The Anglo-Norman conventual churches were in general arrangement similar to those of the Holy Trinity and St. Stephen at Caen: they were cruciform in plan, with a low tower rising at the intersection of the choir and nave with the transepts: the former, as in the case of some churches in Germany, terminated with a semicircular apse, as in Peterborough and Norwich cathedrals. Apsidal eastern terminations were frequently appended to the chapels attached to the churches. At Romsey church, Hants, are two of these apsidal chapels, lying eastward of the transepts, and also two at the eastern termination of the building. In the cathedrals of Canterbury, Norwich, and Gloucester, as well as in the abbey church of Tewkesbury, several of these apsidal-shaped chapels exist. The aisles were continuous throughout the choir as well as the nave, so that on solemn occasions the whole church might be traversed in processions. The altar was generally affixed to a low reredos screen or wall, which was placed between the easternmost piers. Above the aisles that extended round the nave and choir was a triforium, which communicated with chapels similar to those below, as at Norwich cathedral. The west, or principal front, was sometimes flanked with towers, in addition to that before named: at the angles of the transepts and porches were generally placed massive buttresses, or else turrets terminated by conical or polygonal-shaped cappings or pinnacles. In the smaller churches, the plans were similar to those of the Anglo-Saxons, and consisted only of a nave and chancel, with a low square tower at the junction, supported by bold semicircular arches: in these the apse at the east end is very frequently introduced; indeed it is a distinctive feature of that style which bears the name of Norman or Romanesque (derived from the ancient basilicæ), and never introduced after the style which

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was immediately received from the Continent, namely, the semicircular-arched, had passed away.

The Anglo-Norman style of architecture might be divided into three classes,—the Primitive, the Enriched, and the Transition: in the two former kinds, the principles are identical, although the mode of ornamentation that is used, unless considered in its various stages, appears to be the result of fresh impressions derived from some foreign source: as regards the latter, it explains itself, having features of a somewhat different character, which were the germs of a style totally dissimilar in principle.

The Norman style embraces the very plainest as well as the richest specimens of work, from that characterized by the low square and circular piers, so numerously distributed about the country, to the florid decoration with which many of our cathedrals and abbeys are embellished. The former of these exhibit but massive and clumsy remains of the classical principles, but they display a grandeur and solemnity of appearance from the solidity of the masonry and smallness of the openings. The piers in the earlier buildings were either entirely square, or else a succession of receding faces crowned by a plain square abacus, the lower edge of which was chamfered.* Isolated circular columns were likewise used in this country shortly after the Conquest, as at the chapel of the White Tower, London, (see page 82,) Great Malvern church, and the cathedrals of Gloucester, Peterborough, Durham, and Hereford,† besides several conventual and collegiate churches; among which latter class of buildings we may refer to Southwell (see page 78). At the later periods, portions of columns were attached to the square piers; those facing the nave or choir were carried up to the clerestory windows, and from their capitals sprung the ribs of

* The nave arches of St. Alban's abbey are of the nature here referred to.

† Fifteen of the twenty-two English cathedrals retain parts of their Norman erection, either in the crypts or superstructure.

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St. John's Chapel, White Tower.

the groining of the roof; the others carried a part of the mouldings of the nave arches, as in Norwich and Peterborough cathedrals. In the latest instances, the square pier is entirely discontinued, and the columns are connected together without the angular pieces.

The arrangement of the interior compartments of the Norman cathedrals and larger churches is that from which nearly all others of subsequent dates were copied; it consisted of three tiers or stages. The lower or larger opening was spanned by a semicircular arch, which rested on the piers before de-

scribed, above which was a horizontal string-course: in the second story, or triforium, were two smaller arches, supported in the centre by a slender column; these were enclosed in a larger arch, the span of which was rather less than that below it; above this was another string-course: in the third, or clerestory, there were generally three arched openings divided by columns, that in the centre being higher and wider than the others, and forming either the window, or an opening before it, in the thickness of the wall. These three arches generally occupied a space equal to the arch below them, and were enclosed in the arch springing from the shaft which formed part of the semicircular stone groining with which the larger churches were usually vaulted.

In all the churches of the Anglo-Normans, without consideration as to their size, the western and southern doorways appear to have been the points on which they bestowed the greatest amount of enrichment: in buildings where every other part is simple in character, we find doorways decorated with a profusion of ornamental mouldings and sculpture. Many of these doorways are composed of a succession of receding semicircular arches, enriched on the edges and faces with bold mouldings, partly covered either with sculpture or with varieties of the zig-zag (an ornament peculiar to this style): beneath the abaci are ornamented columns, which fill up the angles of the receding space; the shafts, as well as the capitals, are sometimes covered with sculpture: those at the west and south sides of Iffley church, Oxfordshire; Ockendon church, Essex; on the south side of Earl's Barton church, Lincolnshire; at the west end of Hemel-Hempstead church, Herts: that inside the porch on the north side of Southwell collegiate church, and that of the southern porch of Malmsbury abbey church, are good specimens of their class.

Many of the Norman doorways have the arch heads filled up, forming that which is called the tympanum: this is frequently adorned by sculpture of the Saviour, angels, saints, or animals; the figure of our Lord is also sometimes enclosed in

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the vesica piscis,* as in the beautiful doorway on the south side of the nave of Ely cathedral: at other times the tympanum is ornamented by a representation of our Saviour in a sitting position, holding a book in his left hand, while the right is upheld as if in the attitude of benediction: † in other examples we find sculptures of St. George or St. Michael

Porch of Southwell Church.

combating the dragon: numerous instances are to be found of symbolical sculpture on the tympana of Norman doorways,

* This is a most ancient mystical figure, and is represented in several basilica mosaics and Saxon MSS. Mr. Hope, p. 163, calls it "the rough outline of the fish."

† Thus placed in allusion to his words, "I am the door: by me if any enter in, he shall be saved."—John x. 9.

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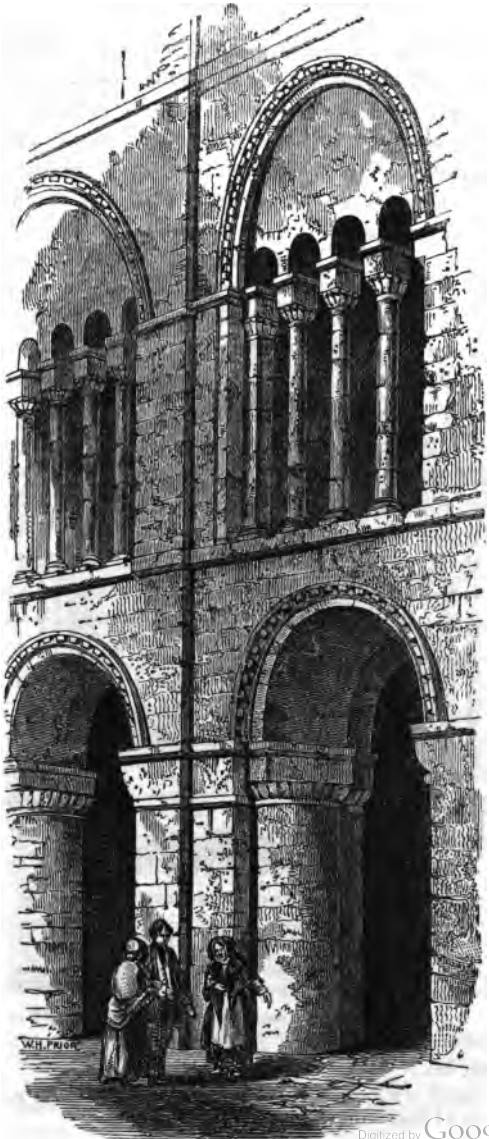

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Compartments of St. Bartholomew's choir.—P. 85.

as at Rochester cathedral, Malmsbury abbey church, Elstow church, Bedfordshire; Water Stratford church, Buckinghamshire; Barfreston church, Kent; and elsewhere.*

Amidst the alterations that were made to the Anglo-Norman churches, when so many of them were nearly rebuilt in a style quite at variance with their principles, the architects preserved the doorways, either from admiration of the workmanship, or reverence for the founders of the original buildings,—of whose piety they wished to retain some visible remembrance. In very many churches of a comparatively late date we find no remains to tell of their Norman origin but the doorway, which has remained undisturbed, although alterations to a very great extent have been effected in every succeeding style of architecture. In London, the churches of St. Bartholomew, West Smithfield, and that in the Temple, retain their original Norman doorways. (See also compartments of St. Bartholomew's choir, page 85.)

Another peculiarity in this style is that the arch is the feature on which the greatest amount of ornament and enrichment was bestowed, as there was scarcely any sculptured moulding then in use but had its origin in, and was applied to, the decoration of the arch. The first deviation from the square angles and receding faces was made by cutting a bead and hollow moulding on the arch, and this principle was carried out in the gradual development of its extreme richness. Among the instances that exist of the most elaborate work of the Anglo-Norman era, we may mention parts of Durham, Norwich, Oxford, (see page 87,) and Canterbury cathedrals; the chapter-house of Bristol cathedral; the college gateway, Bristol; St. Peter's church, Northampton; Steyning church, Sussex; and Castle Acre priory, Norfolk.†

Although in the Anglo-Norman style of architecture great

* Bloxam's 'Gothic Architecture.'

† Durham cathedral, begun about 1090; the choir of Norwich cathedral, between 1086 and 1101; Oxford cathedral, 1120; Canterbury cathedral, 1106; the chapter-house of Bristol cathedral, about 1156.

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Oxford Cathedral.

richness was bestowed on some of the parts, yet, taking it as a whole, flatness, solidity, and massiveness were its chief features. The buttresses had little projection, the string-courses were

generally small, and the window openings only sufficiently large to admit so much light to the interior of the buildings as might assist in producing the same impressions of solemnity which the general character of the exterior conveyed.

The decorative details and mouldings of this style, although numerous, are of a peculiar description, and appear to have been worked on the originally plain surface of the masonry, and, in many cases, re-worked at an after period to a greater degree of richness than they originally possessed. The chevron, or zig-zag, for instance, which is the most common or more generally used among the Anglo-Norman enrichments, has numerous stages of improvement: in the earlier instances its form is little more than indented on the plain face of the projection or wall; afterwards we find it partially beaded; then double-beaded with hollow; and in the latest examples it was completely cut away, and standing out in full relief, with a second series of mouldings carved on the backing. The billet-moulding likewise shows its origin in the bead, with spaces cut away to give variety of light and shade. The pellet, lozenge, and cable are very primitive in their composition. The star, nail-head, and embattled frette are likewise extremely simple. From these, and a few others that cannot be explained without illustrations, the whole of the ornamentation of this style is composed, which in some of the instances to which we have referred (with the aid of the receding faces) have produced effects of light and shadow unsurpassed by any later style.

The windows of the Anglo-Norman buildings were usually small and extremely simple, having no mouldings round them, but only a receding face on the outside, the inside being splayed, as at Romsey church, Hampshire, and Steyning church, Sussex.* Towards the beginning of the twelfth century, mouldings and columns were introduced in the

* This church is very interesting, and deserves attentive study: the exterior is extremely plain, while in the interior are some of the most elaborate details of Norman art.

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jambs, and the semicircular heads were carved with the zig-zag and other enrichments: about the year 1180, the highest degree of ornamentation ever applied to Norman art was arrived at: good examples exist at the churches of St. Cross, Hampshire; Iffley, Oxfordshire; and Castle Rising, Norfolk. The arrangement of the west front of the latter building is very curious in its composition and details, and bears a stronger resemblance to the ancient parochial churches of Normandy than any other in this country: the window in the centre of this façade is surmounted by three rows of ornamental mouldings and columns; on either side are three arches supported on columns, and from other columns in front of these spring larger interlacing arches, encompassing two of the others. This part of the church is supposed to have been erected by Odo, Bishop of Bayeux, about 1090, but from its arrangement and enrichments we are led to suppose the date not to be earlier than 1170. The windows of the later churches are much larger, and are sometimes found introduced in pairs, with a shaft between them, and enclosed in a larger arch: they were likewise grouped together in triplets, as at Iffley and Romsey churches. There are very few circular windows remaining in this style; that at the eastern transept of Canterbury cathedral, and also that at Southwell minster, appear to be of this date.* There is one at Chichester cathedral, erected about A. D. 1150, and another at Barfreston church, Kent, A. D. 1180.

The Norman style, which had been gradually advancing, in the richness of its arrangement and ornaments, from the period of its introduction into this country up to the middle of the twelfth century, began from that time to evince the germs of different combinations and features, which were characterized by the verticality of its principles, and a change from the semicircular to the pointed form of the arch. This has been called the Transition, or Semi-Norman style, as in it we find the

* 'Glossary of Architecture.'

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pointed arch in its incipient state, formed by the intersections of portions of a circle, whilst the details and accessories remained unaltered: thus was the pointed arch, for nearly fifty years, completely intermixed, more or less, in conjunction with the pure Norman style, without entirely superseding it, until the close of the twelfth century. We have already drawn the attention of our readers to some of the various theories respecting the direct origin of the pointed arch, and shall therefore offer no further observations on them, but merely consider this prominent feature as we find it introduced in our buildings, apparently resulting from new combinations, and as being the consequence, and not the cause, of a new style.

The Transition, or Semi-Norman style, which lasted during the reigns of Henry the Second and Richard the First, evinced, in its early stages, no other deviation from the Norman than that of the arches being pointed; but these were frequently introduced in situations where the old form was actually built with and even surmounting them. Thus we find them in the choir of the church of St. Cross, Hampshire: the lower arches here are pointed, whilst the arcade above, as well as the clerestory, is strictly Norman: the same arrangement exists at Malmsbury abbey church, with the exception of the upper story having been built nearly two centuries afterwards. In the transept of Romsey church, at the west end of Croyland abbey church, Lincolnshire, and in many other instances, the pointed arch is placed beneath the semicircular; and this has not been an after alteration, but is really the original work. The span of the arches at this time became greater, the columns higher and less massive, and the capitals began to be ornamented with a kind of foliage terminating in a volute or bulbous leaf.* The columns were frequently octagonal in form, and the bases had additional mouldings with an overlapping ornament at the angles, and were placed upon square plinths.

* The eastern part of Canterbury cathedral illustrates these peculiarities.

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Although the alteration of the arch and diminution in the massiveness of the columns were at first the only indications of a transition from the style of the Normans, yet other peculiarities, which followed in gradual succession, bear testimony to the certain progress that was being made towards a more ornate and lighter style of architecture. The mouldings were more generally beaded and less massive, yet the use of the zig-zag, of various forms, was still retained. The columns of the doorways were frequently banded in the centre, and placed quite free in the receding angles and splays.

Examples of this period may be instanced in many of the Norman, as well as Early Pointed buildings: the great west tower and south wing of Ely cathedral are especially deserving of attention. Perhaps no finer specimen than this exists in the kingdom: the pointed arch, the trefoiled head, and other features of the next period in this example, here just begin to appear, although the whole aspect is decidedly Norman. The vastness of the surfaces, which are completely covered by arcading and sculpture, both within and without, from the ground to the very roofs, is almost bewildering to the eye: the date is about 1170.* Buildwas abbey, Shropshire; Malmsbury, Kirkstall, Fountains, and Croyland abbeys; the churches of New Shoreham; Rothwell, Northamptonshire; Walsoken, Norfolk; Ketton, Rutland; Bloxham, Oxfordshire; Little Snoring, Norfolk; retain portions of the work of this date. Trinity chapel, and the circular part called Becket's Crown, Canterbury cathedral, built A. D. 1175, are very interesting: St. Joseph's chapel, Glastonbury, erected at this period, is perhaps the richest specimen now remaining of the Semi-Norman, or Transition style, and remarkable for the profusion and beauty of its sculptured detail, as well as the close resemblance it presents in many parts to the succeeding styles.†

* Paley's 'Manual of Gothic,' p. 68.

† Bloxam's Gothic.

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CHAPTER XIII.

THE EARLY POINTED OR EARLY ENGLISH STYLE.

It has been usual to date the introduction of the Pointed, or what has been denominated the Early English style,* to about A. D. 1200, although the vertical principles from which it sprung were not fully developed for thirty years afterwards. At its first appearance it retained much of the heaviness of the preceding style, but all resemblance to the Norman was speedily effaced by the development of its own peculiar and beautiful characteristics, which consisted in the high gables and roofs, the elongated window, the slender shaft, and the high pinnacles and spires. The lancet, as well as the equilateral shaped arch, was used at this period: the former prevails in Westminster abbey, A. D. 1245 (see page 93); while in Salisbury cathedral, which was commenced in 1220 and finished in 1258, the equilateral arch was principally adopted. The mouldings in general consist of alternate rounds and deeply cut hollows, producing a strong effect of light and shade: the tooth ornament is of frequent occurrence, and used only in the architecture of this date.

It is difficult to imagine a greater contrast than exists between the Early English style and that which preceded it; the whole composition of the buildings was changed,—from low to lofty, from heavy to the extreme of lightness, and from the horizontal to the vertical disposition of ornaments and mouldings. Although the progress in the new principles was very gradual, yet, when they were established, every detail and feature of the Norman style was carefully avoided, and an extravagant contrariety was indulged in, which, in many instances, by the too frequent introduction of the bead and

* This, as well as the Perpendicular, or Late Pointed, is peculiar to our country, as nothing similar is to be found in any buildings abroad.

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North end of the Transept, Westminster Abbey.—P. 93.
(The tracery and glass of the circular window is modern.)

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hollow, produced a monotonous effect; and the deep shadows that the hollows presented tended to destroy the appearance of solidity which is so essential to all ecclesiastical buildings.

The features of this style which principally distinguish it from all others are, the lancet windows, the thin isolated and clustered shafts, the buttresses and pinnacles, the foliage, the mouldings, and the sculptured ornaments and figures; all of which must be studied with care in order to understand and appreciate fully its peculiarities, and will be found generally to determine the dates of the churches. The windows are of various kinds in the early period: the lancet windows, long and narrow, of one light, were most frequently used, with merely a small splay on the outside, and without any label moulding; afterwards they were surmounted by labels, which, being continued horizontally from window to window, formed a string-course between them. Two lancet windows under a single drip-stone are sometimes met with, but in the most beautiful specimens of this arrangement the jambs and the pier between the openings are ornamented with slender shafts, crowned by moulded capitals, and surmounted by the mouldings of the arches, over which are moulded double labels, as at Winchester and York cathedrals; St. Saviour's church, London; and many other places. The next arrangement is that of a triplet, or a combination of three windows together, that in the centre being higher, and in some cases larger than those at the side: the arrangement of columns in front of the piers and on the jambs, as well as the arch and label mouldings, is similar to the last noticed. These windows, in the smaller parochial churches, are most frequently placed at the east end of the chancels, and are only splayed, or very slightly decorated with mouldings, as at Wimborne minster, Dorset; Stanton Harcourt, Oxfordshire; and Warmington, Northamptonshire. Of the enriched kind, instances are found in Salisbury and York cathedrals, Beverley minster, Yorkshire, and the churches of the Temple and St. Saviour, London. The annexed view from the nave, now destroyed, of St. Mary Overy or St. Saviour's, is

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St. Mary Overy, from the Nave, now destroyed.—P. 95.

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also worth our observation. Four windows thus disposed, the two middlemost being the highest, are inserted in the east wall of the chancel at Repton,* and five lancets, rising in gradation to the centre, and comprised under a single label, occur at Oundle church, and at the east end of Irthlingborough church, Northamptonshire. In the interior of the richest buildings of this style we find detached shafts standing out in front of the piers and jambs, and supporting another combination of mouldings, as in Durham, Worcester, and Hereford cathedrals, and the chapter-house of Oxford cathedral. The combination that next demands our attention, in consequence of its evincing the germs of another class of Gothic architecture, and by its being the first approximation towards the introduction of tracery in the heads of windows, is that in which a part is pierced over a double lancet window, comprised within a single dripstone. At Brownsover church, Warwickshire, is a very simple specimen; another likewise existed in the painted chamber at Westminster. A very interesting window of this kind is at Stone church, Kent; it has a quatre-foil opening on the outside, which is repeated on a second moulded tracery within, supported by detached columns: the date is about 1260. Circular windows were frequently introduced during the prevalence of this style, and were inserted above other windows within the angular part of gables: fine specimens remain in Beverley minster, and in the cathedrals of York, Lincoln, and Peterborough; others of the transition period exist at Barfreston and Patricksbourne, Kent.

The doorways of this style vary considerably both in form and in the arrangements of the arch mouldings and the supporting columns: in some cases the columns are single detached shafts, placed in a receding angle, whilst in others we find them in three or four receding spaces, and sometimes connected by bands or otherwise moulded: the upper mouldings of the capitals were mostly continuous, and from them sprung assemblages of small bead and hollow mouldings, in which the

* Bloxam.

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tooth ornament was frequently introduced. At the cloisters of Salisbury cathedral; Warmington church, Northamptonshire (erected about A. D. 1250 and A. D. 1260); Byland abbey, Yorkshire, and elsewhere, are instances of a partial application of tracery to the openings of doorways: in the first of these, the head is cinquefoiled, and contained in an arched drip-stone; that at Warmington is rich in the arrangement of its receding columns and mouldings; within the two-centered arch is the trefoiled form, which is deeply moulded, and the hollows filled in with the tooth ornament. In the cathedrals and large conventual churches we meet with double doorways, divided by clustered columns or ornamented piers, and enclosed by a two-centered arch; the space above the openings being filled either with sculptured figures and ornaments, or else by moulded quatrefoiled tracery. Examples of these doorways occur in the cloisters of Westminster abbey; at the south transept, Beverley minster; at Wells, Salisbury, and Lichfield cathedrals, and Higham Ferrers, Northamptonshire. In some of these the heads of the openings are cinquefoiled, and richly decorated with mouldings and sculpture. The west and transept doors of Lichfield cathedral are particularly beautiful, and elaborately enriched.

The pillars usually consist of small shafts (often of Purbeck marble), arranged round a circular pier, and connected by a band of mouldings at half the height of the shafts, and at the capitals and bases: others of different kinds are to be found; a circular or octagonal pillar is common in country churches, which is crowned by moulded capitals, in which the nail-head and tooth ornaments, and also the rich flowing foliage of that style, are used. The buttresses of this date were often very prominent, and are frequently carried, with occasional weatherings, to the tops of the parapets, and terminated either by high pyramidal cappings, as at Lincoln cathedral, or else by acutely pointed pediments, as at Beverley minster and Salisbury cathedral. Buttresses at this period were seldom placed diagonally at the angles of the buildings, although such dispo-

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sition in the succeeding style was very general. The angles of the buttresses were frequently chamfered, or else small shafts, not projecting beyond the face, were introduced. The carved foliage is very remarkable for boldness of effect, and was much used in capitals, brackets, bosses, crockets, and spandrils; it was often so much undercut as to be connected with the mouldings and backings only by the stalks and edges of the leaves. There is generally a stiffness and mannerism in the combinations of the sculpture of this era, but the effect of it is almost always so beautiful, that we overlook its unreality in the great flexibility and freedom both of the conception and execution. The prevailing leaf is a trefoil; this was also used to form the crockets, which had their origin in this style.

One of the principal structures erected at this period, and which demands our notice, is Salisbury cathedral, commenced by Bishop Poore in A.D. 1220, and finished in A.D. 1258: this building is the more interesting from the whole of it being erected in the same style, allowance being made for the advances that were yearly taking place in the art. The nave and transepts of Westminster abbey, commenced A.D. 1245, show a somewhat advanced stage. The greater portions of Lincoln and Worcester cathedrals are of this date, though many alterations have subsequently been made to both. The nave, lady-chapel, part of the transepts, and the west front of Wells cathedral, were erected at this period by Bishop Joceline, between A.D. 1213 and 1239: the west front is particularly rich in design, and is covered with arcades and trefoil-headed niches, in which are sculptured figures, remarkable for their freedom of design. The sculpture of this period is well worthy of note for the beauty, harmony, and elegance of its composition, whether in figures or ornaments, and was never surpassed, even during the fourteenth century, when mediæval art had reached its perfection.*

* The other cathedrals that retain portions of work of this date are,—Durham, the chapel of the nine altars; Carlisle, the choir and aisles; Winchester, the part east of the altar screen; Hereford, the lady-chapel;

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We cannot bring this chapter to a conclusion, wherein (so far as our limits would permit) we have endeavoured to explain the general principles and characteristics of the style which boasts of the first introduction of the pointed arch, without drawing attention to the faith, piety, devotion, and zeal in church building, for which this age was so remarkable. This produced a spirit of rivalry and ambition amongst the clergy and religious orders to surpass each other in the grandeur and beauty of their edifices, as well as in the costliness of their vestments, altars, and sacred ornaments. During this period, viz. the reign of Henry the Third, the largest abbeys, priories, and religious houses, were founded, erected, and richly endowed: the great wealth of the clergy (or rather the piety and liberality of the laity whence that wealth was derived) furnished ample funds for the erection of the most magnificent structures, which were only retarded in their progress by an insufficient supply of workmen to execute them.*

Lichfield, the nave and lady-chapel; Oxford, the chapter-house; Peterborough, the west front; Canterbury, the transepts; York, the transepts; Ely, the presbytery; Rochester, the choir and transept. Of the conventual buildings of this period, we may refer to the following examples: Rivaulx, Yorkshire; Fountains; Whitby, Yorkshire; Netley, Hampshire; Tintern, Monmouthshire; Ripon and Beverley minsters; Milton abbey, Dorsetshire; the greater part of the nave, St. Alban's, Herts; Tynemouth, Northumberland; besides many others. Numerous examples exist of this style in parochial churches: Grantham, Lincolnshire; Higham Ferrers, Northamptonshire; Minster, Cobham, Maidstone, and Hythe, in Kent; as well as many in Lincolnshire, contain some interesting remains of this style.

* Great praise must be awarded to the Freemasons, for the regularity with which their body was governed; for to that must be attributed the prevalence of the same style, in its full purity, in different parts of the country, as well as all the improvements or advances that resulted from the union of men engaged heart and soul in the same good work. The energy with which their undertakings were carried on may be estimated by the fact, that no less than one hundred and fifty-seven abbeys and religious houses were built during this period.

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What a contrast is here presented to the state of things in our own times! The labourers are now numerous, but the sources from which the funds come are comparatively few. Formerly, from the willing contributions of princes and nobles solely, were raised those glorious monuments which, though in ruins, and until lately unheeded, have remained to tell of the zealous liberality of men whose names have not been spared to us, but swept away with the institutions which they founded. These specimens of architecture were not raised merely to please the eye, and obtain the praise of man, or they would have been otherwise placed than in the marsh and the desert: the costly enrichments were lavished on temples for God's honour, in remote and secluded places, where none but the peaceful inmates, the wanderer, or houseless poor, could contemplate the noble product of labour and pious pains.

Such are the beautiful old abbeys, now ruined to rise no more; and may centuries yet to come pass over their remains, that their beauties may, if possible, be more fully and more generally appreciated, and be the means of causing others to follow the example of our forefathers in using their wealth, abilities, and talents, for the noblest of all purposes!

CHAPTER XIV.

THE DECORATED, OR GEOMETRIC MIDDLE POINTED STYLE.

THE style at which we have arrived prevailed during the reigns of the first three Edwards, or from about A.D. 1274 to A.D. 1377, and has been generally distinguished by the term Decorated, though Geometric Middle Pointed has likewise been applied to it.* This, as well as that which preceded it, arrived at full development only by a gradual and almost imperceptible progression, and the stage of transition (as in that between the

* The former by Rickman, the latter by Paley.

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Norman and Early English) might be considered as distinct from, though partaking of, the peculiarities of both. This period of transition has been the cause of a great confusion of terms, as many buildings of a date prior to A.D. 1274 have been described as decorated work, whereas that style did not arrive at its distinctive and settled character until after A.D. 1290.

The Decorated style is of two characters, which can be easily defined by the nature of the traceries of the windows, and should be denominated 'early and late decorated.' In the former, the geometrical figures prevail, consisting of combinations of circles, trefoils, quatrefoils, cinquefoils, and triangles. It is remarkable for the harmony of its forms. The tracery and cuspings were fully developed; and the uniting of several openings as a whole under one arch, or a succession of concentric mouldings, marked an evident deviation from the arrangement and principles of the Early English architecture. This Geometric Middle Pointed style may be considered to have been in use until about A.D. 1327, or the beginning of the reign of Edward the Third, when the compositions of the windows seem to have undergone a change, and the flowing or wavy lines succeeded, producing an almost endless variety of combinations. At the period to which we now refer, viz. from 1327 to 1377, the architecture of this country may justly be considered to have attained its greatest excellence, both as regards graceful proportion and a luxuriant profusion of beautiful ornament and mouldings. By very gradual progression, and almost imperceptible changes, had these principles of graceful design and unequalled beauty of execution been arrived at; and it cannot be denied but that the architectural art of this period was neither equalled nor surpassed in any other country or in any age.

The general plan of ecclesiastical and monastic buildings of this era was little marked by any deviation from that which preceded it: any change in the arrangement is to be attributed more to the requirements of the situation than to any alteration

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in the principles. To the details and parts of the combinations we must look for the distinguishing peculiarities. Throughout the century during which this style prevailed, the same kind of arch was generally used, and was either equilateral, obtuse-angled triangles, or segmental in form. The mouldings consisted chiefly of quarter or three-quarter rounds, with fillets, and in small churches double recessed splays alone were used: the deep hollows and unfilleted beads of the former style were quite discontinued.

The piers of this period, on which the nave arches rested, were frequently composed of half or three-quarter cylindrical shafts, which in some instances had small fillets at their greatest projection, and in others smaller shafts or filleted mouldings were placed at the junction of the large shafts: this arrangement differs from the Early English in the columns being more closely united. The octagonal, cylindrical, and circular pier is more generally to be found in small churches. The capitals are more frequently bell-shaped, crowned by quarter-rounds, fillets, and other mouldings, and having at the lower part a beaded or chamfered astragal. In the richer instances, or in large churches, the capitals were either numerously moulded, or ornamented with light elegant foliage, distributed completely over all parts of the capital but the abacus and the astragal: figures, battlements, and the ball-flower were frequently introduced on it. The bases of the piers differ from those of the preceding style in their being composed of two or more small round mouldings, with either a quarter-round or hollow below, and beneath it a splay or curved moulding was sometimes introduced. The ogee form was in some cases used, but it more frequently denoted a later period. In plan, the base mouldings take various forms, not always following that of the shaft, but changing from the circular to the octagonal, and from the octagonal to the square.

The windows of this style, as we have before stated, differ from those of the Early English style in having their openings connected and blended together either by geometrical or flow-

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ing tracery comprised under two-centered arch mouldings. They are generally large and of good proportion: those which were placed either at the east or west fronts, or at the transepts, varied from three to seven lights each, and were divided by mullions, which at the springing of the arch branched out into either geometrical or flowing combinations. The great variety of the traceries in windows of this style renders their description extremely difficult. In the best and most perfect instances, we find a principal and subordinate arrangement; the extreme mouldings bounding the general forms, whilst the secondary or inside mouldings mark the disposition and form of the lights. It is scarcely necessary to observe that these harmonious arrangements of flowing lines were not produced solely from a correct perception of beautiful forms, but were grounded on that consummate skill and mathematical knowledge for which the Freemasons of this country were so eminent. One of the most elaborate and beautiful windows of this date is at Carlisle cathedral: the geometrical principles on which it was designed have with great care been illustrated by Mr. Billings in his interesting work on that cathedral: he has likewise given the primary, secondary, and tertiary mouldings by which the varied forms are enclosed. The western window of York cathedral is very rich and flowing; the large and beautiful window in the south transept of Chichester cathedral is filled with geometrical tracery. That at the choir of Merton college chapel, and at the west end of Exeter cathedral, are likewise good examples. In some instances, as at the south aisle of Gloucester cathedral, and the tower of Salisbury cathedral, Badgworth church, Gloucestershire, St. Mary's tower, Oxford, and many churches in Lincolnshire, the mouldings of the mullions, jambs, and arches are enriched with small circular ornaments or ball-flowers: these windows are generally only of two lights, the tracery cinquefoiled, and that in the upper part of the arch very simple. Some curious windows of this date exist at Dorchester church, Oxfordshire: in one of these the genealogy of Jesse is represented; on the

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mullions are projecting sculptured figures; these are connected by flowing foliated branches at different heights; the centre mullion springs from a recumbent figure of Jesse, and the whole is surmounted by the figure of our Lord. Ogee-headed windows are not uncommon in this style, as seen at Cracombe, Northamptonshire, 1320, and Great Bedwin, Wilts, 1300. Square-headed windows were very frequently employed, both in the aisles of the smaller churches and in the clerestories; in many of them the ball-flower is inserted into the hollows of the jambs and along the top mouldings, and sometimes it is introduced in the under moulding of the label: instances of this kind of window are to be found at Ashby Folville, Leicestershire, 1350, and Swinbrook church, Oxfordshire. Segmental, flat-headed and circular windows were likewise used: one of the largest and richest of the latter is to be found in the south transept of Lincoln cathedral. Windows of a triangular form, having the sides curved and filled in with tracery, are likewise peculiar to this date, and are used either to fill up the angle of a gable, or in clerestories, as at Barton Seagrave, Northamptonshire, and East Hendred, Berkshire. Square and diamond-shaped windows are sometimes introduced in churches of this period: of the former, a curious specimen is to be found at Whitby, filled in with four quatrefoils arranged angle-wise. The mullions of the windows of this era were very rarely divided between the sills and springings of the arches by any horizontal tracery or transom, which was one of the main features of the succeeding style. At the west front of York cathedral we have the mullions uninterrupted, whilst at the east end, which is of later date, or transition style, there are transoms. Pedimental labels, covered with crockets, and surmounted by rich double finials, were used over the more important windows, as well as to terminate niches. The tympanum above the windows, or the part between the arch mouldings and the angles, was filled in with rich flowing panelling, and sometimes with figures: some windows at York cathedral, and Howden church, are good examples of this

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arrangement. It is unnecessary to cite any further instances, as with the general description we have already given, the careful student of Gothic architecture will be able to discern the more important characteristic features of the windows of this period.

The buttresses of this style are more varied in form and disposition than those which preceded: in the smaller buildings, they are generally of two stages, and frequently finished by gable-headed terminations, sometimes adorned with crockets and finials. A gable is sometimes introduced at the middle weathering, and at the top there is only a succession of weatherings or moulded water tables, with a splay and half-round moulding at the nosing or greater projection; as at Grendon, Warwickshire. Those of Merton college chapel, Oxford, are good of their class. Traceries and panels are frequently sunk within the faces of the buttresses of the large ecclesiastical buildings; those of York and Howden are fine examples. Niches were likewise made in some of those attached to parochial churches, as at St. Mary Magdalen, Oxford, and Witney church, Oxfordshire: the latter is very rich, having niches in both stages; the lower is moulded and surrounded by an ogee head, with diaper-work in the angles; the upper one is terminated by a crocketed gable, filled in with perforated tracery; both niches have small pedestals. Some of the buttresses at York cathedral and Beverley minster* are rich and free in their composition: they have moulded niches open on three sides, with arched and crocketed gables above; these are surmounted by sunken panels, and terminated by pinnacles decorated with crockets and finials. Except in large buildings, where the buttresses have pyramidal terminations, the gable heads are not carried above the parapets. In many cases both the heads and set-offs are weathered and splayed without enrichment: the buttresses of this date were placed at the angles, or diagonally with the faces of the wall, an

* See Pugin's 'Specimens,' and Britton's 'Chronological History.'

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arrangement which was scarcely ever seen in the preceding style. Flying buttresses were used at this period, and are to be seen in Exeter cathedral, Beverley minster, and other large erections.

The early decorated doorways retain much of the arrangement of the former period, and had on each side engaged shafts with moulded and ornamented capitals: these were gradually abandoned, and the mouldings of the arches were carried down to within a short distance from the ground, and were finished either by bases, or else the mouldings terminated on splays. The arch mouldings were usually a combination of small rounds, filleted beads, and hollows, and were composed in two or three sets; in some instances the arch mouldings are lost or merge into larger jamb mouldings of a round or hollow form, uninterrupted by any horizontal moulding or capital: a good instance of this is at the west end of Tunstead church, Norfolk.* Ornaments of a square and four-leaved nature, as well as the ball-flower connected by stems, were applied to enrich the hollow mouldings of the jambs and arches. Crocketed canopies were sometimes used at the springing of the arch; the north door of Adderbury church, Oxfordshire, is particularly fine in this respect.† The doorways of the most important buildings of this date were particularly rich in arrangement and ornamental sculpture, and had a second label of a pedimental form covered with crockets: within this, a figure of the patron saint, or of the founder, was frequently sculptured in high relief, under a canopy, and surrounded by traceried panels or ornamental foliage: those at the west end of York cathedral are very good examples. The large doorways are sometimes divided by clustered shafts and mouldings into a double opening, as at the entrances of the chapter-houses of York and Wells cathedrals. The openings

* On the south door of this church there is some ornamental iron-work of this period, which for freedom of design and execution cannot be surpassed.

† Bloxam's 'Gothic Architecture.'

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of the doorways were frequently cuspid or foiled; that at the west end of Tintern abbey is beautifully composed. At Cley church, Norfolk,* there is a rich specimen of a single doorway with a foliated and traceried arch; others, of different degrees of simplicity, exist at Ewerby church, Lincolnshire, and Higham Ferrers, Northamptonshire.

The niches of this period were generally surmounted by canopies of a pedimental or ogee form, and were of very elaborate workmanship, more particularly those of the latter part of Edward the Third's reign; they frequently projected in front, either in a curved or splayed line, and were enriched with crockets or finials. Niches were frequently placed at the sides of the east window in the chancel; though in some instances, as at Selby church, Yorkshire, we find only brackets with sculptured figures and ornaments, and above it a rich canopy, without any recess being made in the wall for the figure.

The parapets of this date were very frequently pierced with trefoil and quatrefoil openings; that of a wavy flowing form was much used: examples are to be seen at Selby church, Yorkshire; St. Mary Magdalen, Oxford; and Brailes church, Warwickshire. Solid parapets are more general in the smaller churches. Gurgoyls, or grotesque figures projecting from the walls, were first employed to conduct the water from the gutters.

The crockets, finials, and enriched capitals were particularly graceful; and the foliage or ornaments of which they were composed, were divested of the mannerism of the former period: they exhibited a more natural freedom, the leaves were more gracefully disposed, and were executed with great boldness: the oak, vine, ivy, and hazel foliage were more generally followed. The carving throughout York cathedral deserves notice and careful study.

The churches that retain portions of this very beautiful style of architecture are extremely numerous; indeed, in the

* Illustrated in Brandon's 'Analysis.'

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middle and northern parts of England there are few in which some feature of it is not left. Among the monasteries or larger buildings we must direct attention to the remains of the abbeys of Tintern and Guisborough, which are splendid specimens of the Geometric period. Selby and Howden churches, Yorkshire, of a later date and more florid character, are noble edifices of this style. The gateway of St. Augustin's, Canterbury, is particularly good in design. Queen Eleanor's crosses at Waltham, Northampton, and Geddington are likewise interesting. Amongst the cathedrals that retain portions of work of this date, we may draw particular attention to that of Lincoln, the choir of which is generally admitted to be the most perfect structure in England, both internally and externally, and is a model of the Geometric Pointed in its earliest form. The chapter-houses of York, Salisbury, and Wells cathedrals, as well as the abbey of St. Mary, at York, are of the same period, and contain valuable studies of their peculiar detail. The nave of York cathedral is of a richer class of decorated work, and of a later date. Winchester contains some good wood-work in the stalls. The lady-chapel and other parts of Lichfield cathedral, the centre tower and spire of Salisbury, and parts of Beverley minster, are of this period. Exeter cathedral contains portions of both the earlier and later dates. The cloisters of Norwich cathedral are very interesting, though they were not erected at one time; they were commenced in 1297, and not completed for upwards of a century.

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CHAPTER XV.

THE PERPENDICULAR, FLORID, THIRD, OR LATE POINTED STYLE.

We have now reached the third period of the Pointed Style, which may be dated from the latter part of the fourteenth century to the commencement of the sixteenth, or the early times of Henry the Eighth. To mark its architectural peculiarities, and the general features which distinguished it from that which preceded, the above titles have been applied. The appellation of Perpendicular,—which was bestowed on it by Rickman, and has since been very generally adopted,—is in some respects appropriate and descriptive; yet it by no means conveys an adequate idea of the distinguishing characteristics. It appears to be tolerably correct if we consider it only as regards the mullions or parts of the traceries of windows, and the upright forms of the ornamental panellings with which the surfaces of the most elaborate ecclesiastical buildings of this date were enriched: to these features we must admit a perpendicularity beyond that which the preceding style presented; but it is no less obvious, that with these exceptions, the term Perpendicular is equally, if not more, applicable to the first and second Pointed periods. With propriety might the term Horizontal be applied, as it would be equally or more appropriate of the two; since the mullions are crossed by numerous horizontal lines, and the divisions of the panellings are as positively marked. The tops of the doorways are enclosed by horizontal labels; the pointed character of the arch is in a great measure lost, and marked by a squareness of outline; the string-courses and base-mouldings are more numerous and strongly defined, even in buildings of comparatively small dimensions. Although the term Perpendicular is so very inefficient for the purpose of satisfactorily elucidating the numerous deviations from the

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former styles, yet no other single phrase can probably be found which would be more explanatory. The appellations of Third, or Late Pointed, are more comprehensive and explanatory as to the period of this style, and less likely to mislead, by causing the student to attach too much importance to some of its peculiarities, to the hindrance of a more careful study of the principles, which this class of architecture so much requires.

We have made the preceding remarks, less with a view of provoking controversy or to advance any term of our own, than to warn those in search of the true principles of design from attaching undue weight to conventional terms, however generally used: we shall now proceed with a description of the most important features of this style.

That the church architecture of this country reached its highest degree of excellence during the Decorated or Second Pointed period, is undeniable; yet, still we must not too readily believe (as some writers would persuade us) that a general debasement of style, and sudden retrogression in architectonic taste, were the natural consequences of the first deviation from its principles of composition; and that all works which were executed subsequently, presenting different combinations and details, were but so many rapid advances in the downward course of Gothic art, and therefore not entitled to consideration, much less to the admiration which, until lately, was so generally bestowed on them.

During the period of transition, and indeed throughout the greater part of the fifteenth century, works were executed which (although they may be somewhat at variance with the spirit of the pure style from which they originated) must ever be regarded by the unprejudiced as possessing unsurpassed excellence, in point of the execution of the sculpture and ornamental embellishments. The great variety of design, elegance of arrangement in the lace-like combinations of traceries on the walls and groinings, the delicate carving and almost magic intricacy which is displayed in the

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canopied niches, or tabernacle-work, in the screens or stalls, must in justice excuse the earlier examples of this period from that censure, which, by being justly bestowed on the ecclesiastical architecture of the last Henry, has, to a considerable extent, caused a veil to hang over the architectural excellences of the few preceding reigns.

In order to give a satisfactory elucidation of the elements of the Third Pointed, or Perpendicular style, we ought to consider it with reference to its precursor, and exhibit the numerous changes which are visible in its details and combinations. To accomplish this, and trace the progressive steps from one class of constituent principles to another, more space would be required than our limits admit of; for as the changes were more gradual than in the preceding styles, and the deviations were more frequently caused by fresh requirements in the arrangements, or a feeling for more general ornamentation, it would be necessary to analyze so many examples to explain fully our views, or to follow a successive course of inquiry.

It is essential that this should be borne in mind, and that we enter less on the transitions than the positive differences between the second and third classes of pointed architecture: our notice will therefore have reference more to the later than earlier periods. The chronological list of buildings, with which this book terminates, will include several which might be interesting as examples of transition work.

The general peculiarities of the fully developed style of the fifteenth century are chiefly visible in the increased expansion and the upright and square tendency of the tracery of the windows, the gorgeous fan-like tracery of the groinings, the four-centered arches and horizontal lines of the doorways, the excessive decoration of the wooden roofs, and in the introduction of heraldic enrichments and colour.

The strongest evidences which can be adduced to prove the charge of retrogression from the pure principles which pre-

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ceded, are to be seen in the depressed form of the arches of the later period, the low angle of the roofs and gables, and the introduction of useless battlements instead of the pierced parapet. As regards the two first of these objections, it is obvious that they resulted from a desire to add to the richness and beauty of the sacred edifices. The cause of the nave arches being reduced in height was to give greater consequence to the clerestory windows, and increased opportunities for the display of the painted glass which at this period was most lavishly used for the adornment of churches: the flatness of the curvature of the heads of the west doorways resulted partly from the same motive, viz. the enlargement of the window, as well as to make the doorway compose with it, by joining the label with the string-course, which was usually just below the sill of the windows. The flatness of the angle of the roofs was the natural consequence of the increased height and size of the clerestory windows, as the height of the nave walls was in all probability sufficient, without making the roof a feature of importance: besides, had it been constructed at the same slope as in the earlier periods, the western tower, against which it usually abutted, would have required a disproportionate and in other respects unnecessary raising.

But we must likewise consider this subject independently of these matters of detail: the principles on which the buildings of the fifteenth century were designed were different; the same altitude was obtained, but by other means: in the Decorated style, the roofs were made accessory to that object; whereas in this they were only considered as coverings, and therefore were concealed as much as possible behind the stone-work. In three of the richest and most remarkable buildings of this period, viz. Henry the Seventh's chapel, Westminster; St. George's chapel, Windsor; and King's college chapel, Cambridge,—the external roofs are so flat as not to be seen from the ground, but are screened by enriched parapets, which harmonize with and form a beautiful termi-

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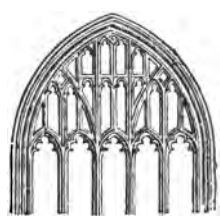
nation to the substructure. The introduction of battlements cannot be justified in an ecclesiastical edifice; the form was used simply to produce a more pleasing effect than that which an unbroken line of parapet would present, more particularly in the upper parts of the buildings.

Although to this style the depressed or four-centered arch was first applied, still it was not invariably used in churches, even at the latest periods: the two-centered, more or less obtuse, as well as the segmental form, are to be found in the same building. The compound arch must therefore not be considered as an essential ingredient in the Perpendicular work, as that style had developed itself at a period long before it was brought into use; but from the latter part of the fifteenth century, when it was first introduced, it gradually became flatter, until at last the arched form merged into two lines slightly inclining from the centre, and terminating in small curves.

The windows of this period exhibit in their traceries a most decided deviation from those of the Decorated class: in the latter, all the lines are flowing and curved, whereas in this the principal mullions are carried up perpendicularly to the enclosing arch, with curved or horizontal intersections: above the trefoiled arches, which connect the mullions at the springings, other smaller mullions are introduced, thus making the openings only half the width of those below: these are united at two or three different heights by horizontal lines and smaller arches.



Window from Christchurch, Hants.

Segmental-arched as well as square-headed windows were frequently used, more particularly in the clerestories; and in some instances they are set so closely together as nearly to form a continuous perforation: numerous churches in Suffolk are peculiar in this respect; those at Long Melford, Lavenham, and Lowestoft are good examples, though it

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is nearly impossible to form an opinion of their original effect, from the absence of the stained glass with which they were filled, and for the introduction of which the windows were thus arranged.*

The groined ceilings of this period particularly deserve attention; in no other style is the fan-shaped or enriched radiating tracery to be found: the cloisters of several of our cathedrals retain some good examples; that of Gloucester is particularly fine. The buildings in which it is introduced on its largest scale, and in its greatest beauty, are Henry the Seventh's chapel (see pp. 115, 117); St. George's chapel, Windsor; and King's college chapel, Cambridge: in the former, the most profound skill has been displayed in the geometrical composition, in the luxuriancy of ornament, and in the scientific principles of its construction: the means by which the numerous large stone pendants are supported are beautifully disguised by the enrichments. The ceilings in the other buildings do not present the same variety or complexity of arrangement; they possess all the elegance for which the fan-like groining is so remarkable, and the whole surface of the stone is worked into a variety of radiating traceries. The construction of the latter differs from the others in one respect; there are no aisles to act as sustaining abutments to the lateral pressure, which is much greater than in Henry the Seventh's chapel, in consequence of the very depressed form of the

* In examining the ancient ecclesiastical buildings of this country, too much care cannot be bestowed in endeavouring to find out the motives of their designers; otherwise, from their mutilated remains, very erroneous conclusions will be arrived at. It is marvellous that so much has been spared to us of our churches: they have been exposed to sacrilegious spoliation, to fanatical desecration and partial destruction, and then left for two centuries neglected, unprotected, and unheeded; excepting in some cases, where the few remains of internal enrichment have been ignorantly or wantonly defaced. Limewash, pens,—or pews,—have indeed done their duty in the work of disfigurement; whilst, in some districts, dirt and cobwebs are most scrupulously retained, and, from habit, considered an essential feature in a church.

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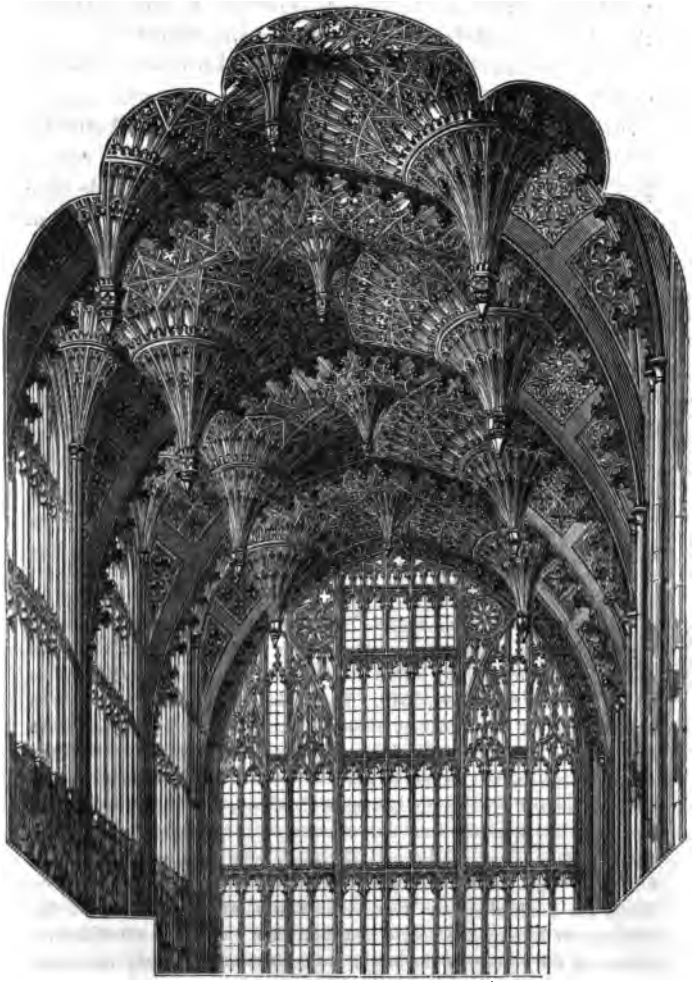

Henry the Seventh's Chapel.

vaulting. This was remedied by the introduction of massive buttresses, carried out to a great extent beneath the lowest

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weathering, which are judiciously connected by small chapels, thus disguising their necessary extreme projection.*

The piers, or detached pillars, from which the nave arches spring, were in the buildings of this period less solid than in the Decorated style, generally consisting of four small circular shafts, separated by deep hollows, which, towards the end of this style, were divided either by fillets, beads, or double ogee mouldings. In plan, the general arrangement was that of a square, placed diagonally with the face of the walls: sometimes, however, they were contracted in breadth, so as to become narrower between the arches, or from east to west, than in the opposite direction,—thus being diamond-shaped. These attached shafts rested on octagonal bases, and more generally were finished by moulded capitals of the same form: in some instances the mouldings of the piers were continued in an uninterrupted sweep to the apex of the arch, and sometimes panelled, as at Sherborne, Dorsetshire: the hollows and the smaller members between the shafts were in most cases continued round the arches. The spandrils of the nave arches

* Henry the Seventh's chapel, Westminster, styled by Leland 'orbis miraculum,' was commenced on the 24th of January, 1502 or 1503, and completed to the vaulting before the King's decease in 1509: the whole was finished by Christmas, 1519. The design of this building has been attributed to Sir Reginald Bray, though he only lived to see the first stone laid; it was carried up and finished under Prior Bolton. St. George's chapel, Windsor, was begun in 1476 by Edward the Fourth, who constituted Richard Beauchamp, Bishop of Salisbury, master and surveyor of the work: Sir Reginald Bray was engaged on it by Henry the Seventh: its completion, however, did not take place before the early part of the following reign. King's college chapel, Cambridge, was founded by Henry the Sixth about the year 1446: it was proceeded with until the accession of Edward the Fourth in 1461, when a stop was put to it by a seizure of the revenues: the works were afterwards partially proceeded with, as the funds permitted. In 1484, the east end of the chapel was only carried up to the top of the window;—thus it remained until 1508, when Henry the Seventh engaged to finish it: this was not accomplished until July, 1515.

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Henry the Seventh's Chapel.

were sometimes filled in with panelling; those of Winchester cathedral are remarkable in this respect. The shaft towards the nave was frequently carried up to the springing of the clerestory windows, and on the capital with which it was surmounted, the wall-pieces and arched portions of the roof rested: good examples of this arrangement are frequent in the Suffolk and Norfolk churches; those at Lavenham and Bury St. Edmund's are particularly fine.

Aisle Arch, Winchester Nave.

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We have before observed that pointed arches of every curvature were used in this style: even in its last stages we meet the two-centered, and the depressed or Tudor arch, combined in the same building; therefore to the mouldings and general arrangement we must look, to form a conclusion as to the dates: the later the work, the more subdivided and thinner it becomes.

The doorways of this style, although they vary so much in the shape of the arched head, are generally included within square-headed mouldings, which are carried down the jambs to the base-mouldings; the spandrils or the corner spaces are enriched with panelling, quatrefoils, sculptured ornaments, and shields, on which the arms of the founders or benefactors were carved. The upper members of the base-mouldings are sometimes carried with good effect up the sides, and along the top of the doorway, thereby serving as a label. On the sides of some of the western doorways, niches with canopies were introduced;—that at Fakenham church, Norfolk, is a very good example: many others are to be found in the same county, which is so very celebrated for the excessive richness of the buildings erected during this period. The wooden doors were generally covered with a profusion of panel-work, with deeply recessed mouldings, from which sprung traceried heads, increasing in richness to the apex of the arch.

This style is celebrated for the very ornamental character of its porches, which were often covered with traceried panels, and niches for the figures of the saints. Some porches were of large dimensions, and had a room over the groined entrance,* which frequently contained a piscina, and was used as a chapel; in some, a fire-place is provided, and served for a dwelling room for a priest.

Those of the churches of Northleach in Gloucestershire,

* This, in modern times, has been called a Parvise; although that name in ancient writings seems to refer more particularly to a porch or open area before the entrance to a church. The origin of the term is involved in obscurity.

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Burford, Oxfordshire, and Oundle, Northamptonshire, are celebrated for their size, as well as the elegant and elaborate nature of their compositions. The top of that at Burford is finished with a panelled and embattled parapet, with a rich string-course beneath; at the angles are buttresses with crocketed pinnacles: the interior is panelled, and the roof is groined with fan tracery.

Other examples of porches, equally rich in design, are to be seen at Gloucester and Canterbury cathedrals: those of the churches in Norfolk are interesting from their being in many instances covered with tracery, flush with the face of the wall, without any relief, and the inside part filled in with split flints, which very distinctly mark the forms by the contrast of the colour. In some smaller porches, both the roof and the walls are constructed of stone, as at West Hendred in Berkshire, and Broughton church, Lincolnshire. The porches of this style vary in detail and arrangement from extreme plainness to excessive richness; they, however, retain the general peculiarities of the style, and are easily distinguished.

The next features in the churches of this period, which particularly mark them from that which preceded it, and demand our attention, are the wooden roofs: these are very numerous, and frequently found in buildings of a prior style, where the original roofs, for want of repair, have been removed. The pitch or slope of the roofs of the fifteenth century was, as we have before observed, much lower than before, and (as in the arches) approached gradually nearly to flatness: the roofs were not visible outside, being concealed by the parapets. They are generally divided into bays by tie-beams and trusses, or larger rafters; these were faced with mouldings, ornaments, and painting; the triangular part between the tie-beam and rafters was filled in with perforated tracery; in the centre was an ornamental king-post. Beneath the tie-beam, braces were frequently placed, which rested on stone corbels, and carried some of the weight from the top of the walls: the spandrils were filled in with pierced tracery. The churches of Somer-

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setshire, Norfolk, and Suffolk retain the finest examples of the various modes adopted by the architects of this period to ornament the construction of their roofs: every moulding and ornament, at the earlier period of this style, had its purpose, and necessity, more than a preponderating desire for enrichment, influenced their introduction. Towards the close of this style, we frequently find that the whole of the rafters are hidden by panelling and combinations of squares and parallelograms, with bosses at the intersections of the ribs. The roofs of the chapter-houses of Exeter and Canterbury cathedrals, those in the churches of St. Mary, Bury St. Edmund's, and St. Peter, Lavenham, Suffolk, and in New Walsingham, Norfolk, are good specimens of this description. Another class, peculiar to this style, is called the hammer-beam roof; this is of as lofty a pitch as that used during the Decorated period; it is so framed that the tie-beam is dispensed with. A horizontal timber, called a hammer-beam, on which the principal rafters rest, projects from the wall (about one-quarter the width of the nave) and is supported by wall-pieces and spandril braces; these sustain the queen-posts and struts, which connect the hammer-beams with the principal rafters. The rafters are tied together with collar-beams at about half their height; wind braces are likewise used to add strength to the framing. The ends of the hammer-beams are usually ornamented; in some cases the greater part is concealed by carved figures of angels bearing shields and scrolls. One of the most beautiful examples is that over the nave of St. Mary's, Bury St. Edmund's, and is only second to that of Westminster Hall. Another fine roof covers the nave and chancel of St. Peter Mancroft church, Norwich: in short, so very numerous are the varieties of arrangement and decoration of the roofs of this style, that they would engage an entire chapter if we could give them the description which they merit: this our space will not permit. Painting and gilding were much used, more particularly on that part which was nearest the altar: the ground of the

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panels was usually azure colour, and studded with gilt stars, to represent the firmament of heaven; it was often covered with ornaments and texts; the mouldings were likewise painted in different colours, and the beads striped or dotted with flowers: that of the nave of Aldenham church, Herts, retains its original colours; on the rafters and tie-beams, flowing ornaments are painted. It has been often stated that on this part of the church more expense and attention were bestowed than on any other: this is erroneous; the principles on which these buildings were designed differ widely from those of the present day; one part was not starved, to enrich another: where we now find roofs of exceeding richness, we may be assured that the other parts were uniformly elaborate; but the hand of the fanatic or the ignorant has destroyed those parts more immediately within its reach.

The screen-work of this period was particularly rich, and is to be distinguished from that of the thirteenth and fourteenth centuries (of which existing examples are rare) by the mullions, or divisions of the traceries, being moulded instead of consisting of cylindrical shafts, with capitals and bases. These screens generally separated the chancels from the body of the church, and supported rood-lofts, which were approached by small stone staircases in the walls; the front was richly panelled, and the under side formed into a large coved cornice, which connected it with the screen below. The lower part was not pierced, although the divisions of the upper or open part were continued down, and arranged into panels with traceried heads: on the sunken part, figures of the saints were often beautifully painted. Screens were likewise used to enclose portions of the east end of the aisles, as chantry chapels. Good examples are to be seen at Higham Ferrers, and in other churches in Northamptonshire and Norfolk.

The octagonal turrets of this style are frequently surmounted by ogee-headed terminations, on the angles of which crockets or carved animals project. They are constructed

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as buttresses round Henry the Seventh's chapel: at Winchester cathedral, King's college chapel, Cambridge, and St. George's chapel, Windsor, they are likewise to be found.

The towers of this era retain the peculiarities of elaborate panelling and decoration which were used throughout all the other features of the buildings of this style, although no distinct characteristic (besides the forms of the mouldings and arches) is visible beyond that for which each county is noted: varieties of design occur occasionally in the same district, which must convince us that the ancient builders were not so much fettered by fixed rules or single notions in their combinations (as we seem to be at the present day), but had the desire and ability to give fresh expression to the prevailing style of details. The tower of St. Nicholas, Newcastle, is single and peculiar in its design. "From the base of the octagonal turrets, which crown the angular buttresses, spring four flying buttresses, on the intersection of which is placed an elegant lantern crowned by a spire. The flying buttresses are crocketed, and are particularly graceful in form. This steeple is as fine a composition as any of its date, and the lightness and boldness of the upper part can hardly be exceeded." * It is Early Perpendicular, and is the type of which there are various imitations: the best known are those of St. Giles's, Edinburgh, the church at Linlithgow, the college tower at Aberdeen, and its modern imitation by Sir C. Wren, at St. Dunstan's in the East, London: but all these fall far short of the original.

Spires at this period are not unfrequent; and although they are considered as one of the main features of the preceding style, yet many examples are found in Northamptonshire and elsewhere, both with and without crockets at the angles;—those of Kettering, Rushden, and Oundle churches are of good proportion;—those of Louth, in Lincolnshire, built between 1501 and 1518, and the earlier one of St. Michael's, Coventry, 1395, are likewise celebrated.

* Rickman.

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There is another termination which is perhaps peculiar to the towers of this date. The ordinary square tower is surmounted by an octagonal lantern of smaller dimensions, and is connected with the composition of the tower by flying buttresses from the bases of the angle pinnacles. That of Lowick in Northamptonshire is by far more graceful than that of Fotheringay, though perhaps the latter is better known; it has crocketed pinnacles at the angles, with light traceried windows between. That of Boston in Lincolnshire is one of the finest compositions of the style; the walls and buttresses are well arranged in panels, except the belfry story, in which the window is so large as nearly to occupy the whole width of the tower. The rich and elegant octagonal lantern rises from the tower, and is supported by flying buttresses from the four pinnacles; this lantern is panelled throughout, and each side is pierced with a large two-light window with double transoms. This composition gives to the upper part of the steeple a richness and lightness of appearance scarcely equalled in the kingdom.

Campanile towers are to be found: that at Evesham is interesting from its grouping with the adjacent churches: another fine example is to be seen near Norwich.

The most remarkable of our Perpendicular towers is that of Gloucester, erected about 1455 by Abbot Seabrook; it rises above two hundred feet from the ground, and about one hundred from the roof of the choir. It is of two stories, with two windows in each face, arranged within an elaborate composition of buttresses and panels of the very richest description, and flanked by four perforated turret-like pinnacles of the most delicate work, which have an appearance so light and graceful, almost beyond the natural capacity of stone-work. This has had its influence on the erections of others in the surrounding districts, as we find the same character prevailing in Somersetshire, and near Bristol. Some of the most important of these towers are St. Mary's, Taunton; St. John's, Glastonbury; St. Stephen's, Bristol; at North Pether-

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ton, and Thornbury. The great peculiarity of the Somersetshire towers consists in the richly pierced parapets and pinnacles, the open stone-work of the belfry windows, and the ornamental feature which the external stair turret is almost always made.

Perpendicular towers are very numerous in all parts of the kingdom: among such as best deserve attention may be mentioned those of Gloucester, York, and Canterbury cathedrals; Cirencester, Gloucestershire; Great Malvern, Worcestershire, and that of St. Mary Magdalen college, Oxford.

Magdalen College, Oxford.

Of the cathedrals which have had alterations made during the period we are now concluding, we may instance those of Winchester, Gloucester, Canterbury, Norwich, Bristol, Wells, and Worcester.

In our description of Gothic architecture, we have been under the necessity of confining ourselves solely to those parts of the ecclesiastical buildings whose various modifications constitute the most obvious distinctions between one style and another. We have only presented a mere sketch of the peculiarities, and enough of the principles to show that the

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changes of style were gradual, and the results of a desire to improve in general combinations and more enriched details. To assert that all the works of the Gothic masons at any date were perfect, and devoid of inconsistencies, would be to mislead: it is however surprising that so little of the defective should exist, when we consider the insufficient number of architects and masons for the host of buildings which were in the course of erection at the same periods. Let the student of this class of art endeavour to discriminate between that which is really good, and accidental or compulsory peculiarities; and not attach undue importance to, or endeavour to imitate, features whose only recommendation is their quaintness or picturesque effects, or the ingenuity displayed in disguising that which is otherwise deficient in harmony or arrangement.

CHAPTER XVI.

THE CASTELLATED AND DOMESTIC BUILDINGS OF ENGLAND, FROM THE NORMAN TO THE TUDOR PERIOD.

THE buildings of the Anglo-Saxon nobility, as well as those of the burgesses and common people of this country, were of a very humble character, and constructed of timber covered with reeds and straw: the former, says William of Malmsbury, "squandered their ample means in low and mean dwellings." On the settlement of the Normans after the Conquest, the kings, nobility, and prelates erected large and magnificent palaces or castles, and the barons were equally jealous in raising fortified castles, as were the prelates in the erection of ecclesiastical buildings. This change, like all others in the art of building, was the result of necessity: the Normans found that although they had conquered, and intended to retain possession of the country, yet they were surrounded by

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vassals by whom they were detested, on account of the plunder and subjugation to which they had been compelled to submit.

To guard against an expulsion from the island, (which was far from improbable,) the Conqueror resolved to encourage his nobles and prelates in the erection of fortified places, and for that object made large grants of lands to such as had the power to build, either by their own means or exaction. Amongst the castles erected during the reign of the first Norman king, or shortly afterwards, may be mentioned, the Tower of London, the castles of Porchester, Canterbury, Rochester, Dover, Colchester, Norwich, Ludlow, Hedingham, Guildford, Oxford, Newcastle-upon-Tyne, Corfe, Bamborough, and Richmond;—these in plan were either square or oblong. Of the round or polygonal, the following are the most important: Arundel, Conisburgh, York, Tunbridge, Lincoln, Oxford, Windsor, Durham, and Berkeley.

William Rufus and Henry I. were as much addicted to the erection of castles as their father; but during the reign of Stephen, which lasted from 1135 to 1154, this practice had become so general, that in the short space of nineteen years no fewer than 1115 had been raised from their foundations; in fact, all those who had the ability or means built a stronghold or castle. A concise description of the general arrangement of these structures may be interesting. An eminence near a river was the situation generally chosen: the boundary walls were often of great extent, and in plan very irregular, their form being regulated by the nature of the position, or levels of the ground; the whole was surrounded by a broad ditch, called the fosse, which could be filled with water when required. The most advanced work beyond the fosse was the barbican or watch-tower; it was placed before the drawbridge and principal entrance as a protection from sudden assaults: these outworks were of great strength, and so planned, that if the gate was forced, those within could still annoy the assailants from the turrets and embrasures during their attack on the draw-

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bridge entrance.* Within the ditch was a wall of great strength, frequently from 8 to 9 feet in thickness, and as much as 30 feet in height; towers were placed at the most commanding or principal positions of it, in which the principal officers of the castle resided: inside of the wall were the apartments of the retainers, servants, as well as storehouses and necessary offices. On the top of the wall was a platform extending the whole length and over the towers: the side towards the ditch was protected by battlements. The great gate was flanked on each side with a square or circular tower, and above the gateway were rooms which communicated with those in the towers. The mode of protecting this entrance was by a portcullis, or framework of wood faced with iron; it was fixed in a groove, and was raised or lowered by machinery: behind this were massive oak double doors, which were either covered with iron or large nail-heads. Within the external wall was a large open space or court, containing the chapel: in some instances another ditch and wall enclosed an inner court or ballium, where the dungeon or keep was placed. This great tower, the principal stronghold of the castle, was built on the most elevated spot, sometimes on an artificial mound, and varied from four to five stories in height. The walls were of great thickness, and in them the passages or stairs were built: the openings were small, and admitted but little light into the apartments. This building was used as the residence of the owner, or constable of the castle, and was provided with underground vaults for the confinement of prisoners. On the second floor was the state room or hall for entertainment, as well as a chapel. This mass of masonry was made to contain provisions and ammunition for a long defence, in the event of the rest of the castle being taken: the well was usually in the centre of the tower, and had openings to each floor.† The

* Instances of the barbican are to be seen at York, Scarborough castle, Yorkshire, and Carlisle castle, Cumberland.

† Those at Rochester and Conisburgh are still existing.

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only admission to this tower was by a door at from 15 to 20 feet from the ground, approached by a steep external staircase. The whole of this strong building was surmounted by projecting battlements and machicolations, through the openings of which arrows, stones, and other missiles were thrown on the assailants. One of the most interesting keep-towers is that of Conisburgh, Yorkshire, built by William de Warren in 1070,

Keep-tower, Conisburgh Castle.

during the reign of William of Normandy. It is circular inside, and divided into three stories or floors: beneath the lowest of these is an apartment, which was probably the dungeon; it is arched over, and has no window or opening

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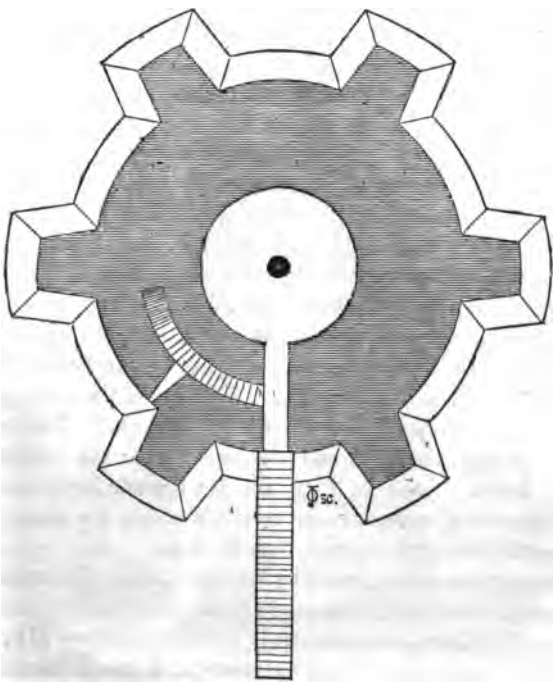
but that in the floor of the room above, through which you descend. The apartment on the first floor was used as a store-room, and had no other external opening than the door; above this was the great hall and other apartments.* The keeps of the Anglo-Norman castles which are most perfect at



Plan of Conisburgh Castle.

the present time are those of the White Tower of London, Rochester, Guildford, Norwich, and Hedingham.†

* The internal diameter is about 23 feet, and the walls are from 10 to 13 feet in thickness; the total height from the ground is about 90 feet.

† The first two were erected by Gundulph, Bishop of Rochester.

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The arrangement of the early castles varied as the circumstances or situation required; but their massiveness remained nearly the same until the time of Edward I., when the castellated as well as the ecclesiastical architecture of this country acquired more varied forms and lighter details. The castles built by this monarch lost much of the stern gloominess of the stronghold, and assumed more the character of a fortified residence,—thus evincing an advance towards a greater refinement in the mode of living; for though the security of the owner of these fortresses was considered, yet in the castellated buildings of this and the following reigns a more commodious arrangement of the principal apartments was adopted, and the window openings were made larger. Caernarvon Castle, Wales, built by Edward I., was both a fortress and a palace; the King held his court in it, and Queen Eleanor gave birth to Edward II. within its walls, on April 25th, 1284. It was commenced by Edward immediately after his conquest of the country in 1282, and the fortifications and castle were completed within the space of one year by the labour of the peasants, and at the cost of the chieftains of the country, on whom the conqueror imposed the hateful task.* This castle was of great strength, and regular in plan: the towers are very beautiful, and in form are pentagonal, hexagonal, or octagonal. The eagle tower is fine, and has the addition of three slender turrets issuing from the top.

Among the castles erected by Edward I., those of Caernarvon, Conway, Beaumaris, Harlech, in Wales, are the most remarkable. Windsor Castle was nearly rebuilt by Edward III., who extended it to the present dimensions, and gave it the appearance of a castellated palace, instead of the fortress which preceded it.†

* Britton's 'Architectural Antiquities.'

† William de Wykeham was appointed to superintend the works which were in progress from the year 1357 to 1375. Many alterations were made by the successors of Edward III. The beautiful chapel of St. George was enlarged and rebuilt by Edward IV., and Henry VII. vaulted the roof

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From the beginning of the fourteenth century, or from the time of Henry IV., the habitable castles gradually assumed a lighter and more pleasing character, until they changed into the castellated mansion, and were adapted to suit the improved domestic habits of each period. Those of Windsor, Warwick, and Raby are therefore remarkable; for, whilst they present the external features of feudal ages, their apartments are at once spacious and elegant: in the window openings, mullions and traceried heads were introduced.

Ragland Castle, Monmouthshire, erected in the reigns of Edward IV. and Henry VII. by the Earl of Worcester, at the close of the fifteenth century, is built of stone, and very interesting, from its combining the external requisites of a defensive castle with the internal arrangements of a mansion. The windows of the great hall, dining-room, bed-rooms, and indeed all those which look towards the court-yard, are divided by mullions and transoms, whilst the heads are traceried. The strength of this castle may be inferred from its having been garrisoned by eight hundred men during the civil wars: at length it surrendered to the parliamentary forces, was confiscated with the large estates of its loyal and venerable owner, and shared the same fate which befell so many similar buildings;—it was plundered and dismantled.

Thornbury Castle, Gloucestershire, commenced about 1511, is another example of the castellated mansion; it is celebrated for the elaborate and beautiful style of the windows, chimneys, and other ornaments. The parts at present existing were built in the reign of Henry VIII. by Edward Stafford, Duke of Buckingham, who was engaged on it for ten years. The completion of this magnificent design was prevented by its noble owner being sacrificed to the resentment of Cardinal Wolsey.*

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of the choir: Henry VIII. rebuilt the great gate in the lower ward, and additions have been made by most succeeding monarchs.

* The Duke of Buckingham was arrested at Thornbury Castle, and

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From what remains of this ducal edifice, it is evident that it was intended to have been built on a very spacious and magnificent scale, and to have rivalled in size and richness of decoration the palaces of Nonsuch, Richmond, and Hampton Court. This presumption may have been instrumental in provoking the enmity of the King, who looked with jealousy on those of his nobles who dared to emulate him in their mansions, and which was not lessened by the Duke being one of the most powerful and wealthy persons of his time.

The buildings which the Duke commenced remained unfinished, and were abandoned to ruin immediately after his attainder. Since that period, all the older parts of the castle, comprising a great many rooms, have been totally demolished, and much injury has been done to the windows and other ornamental parts within the last century.

The towers at the entrance to the inner court are bold in design; the projecting machicolations, still preserved, are very good examples. The bay windows of the great hall are beautifully composed; the plans of the upper and lower parts vary, the one being a combination of five semicircles of four lights in each, whilst the latter is angular, and more solid in construction. It is impossible to describe properly the great oriel window, the enriched chimney shafts, fire-places, and other features of interest, without the assistance of illustrations: we must therefore refer the reader to Pugin's 'Examples,' vol. ii., for further information on the details of this interesting and most ornamental specimen of the castellated mansion.

We cannot turn from the stone erections of this period without notice of Kenilworth Castle, long since dismantled,

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conducted to London, where he was tried and declared guilty of high treason, chiefly on the evidence of Charles Knevet, who had been formerly steward to the Duke; and who, being dismissed for misconduct, sought revenge by betraying his master. Of course, the remorseless Henry consigned him to execution, and his head was struck off on Tower Hill, May 17th, 1521.—Pugin's 'Examples,' vol. ii.

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and whose shattered halls and towers are gradually falling to the ground. This spacious and once magnificent pile was composed of buildings raised at different periods during five centuries, and consequently exhibited almost every variety of architecture that successively was practised from the Norman to that now commonly called the Elizabethan style. Geoffrey de Clinton, Lord Chamberlain and Treasurer to Henry I., was the founder of the castle, to which he annexed an extensive park or chase. In 1172, during the reign of Henry II., it was fortified and garrisoned by the King, when his eldest son raised a rebellion which involved the whole nation in tumult. Henry III. granted it to Simon de Montfort, Earl of Leicester, for life; it remained from that period until 1485 in the hands of the Crown, when Henry VI. transferred it to the possessions of the Duchy of Cornwall. In 1562, Queen Elizabeth, by letters patent, bestowed it on her favourite, Robert, Lord Dudley, afterwards Earl of Leicester. The costly festivities and splendid entertainments which took place here on the royal visit, as well as the history of the untimely end of its princely owner, have given an interest to this above all other castles. All the buildings were enclosed by an outward court, comprising seven acres, surrounded with massive walls, embattled, and strengthened with buttresses and towers. The richest and most perfect parts are the remains of the great hall and the rooms adjoining it, which appear of about the date of Henry VIII. The castles of Warwick, Bolton, and Middleham, Yorkshire, and many others, possess features of great interest both to the architect and antiquary.

The next class or section of defensive mansions may be termed fortified manor-houses, erected of bricks, either plain or ornamental, with an occasional introduction of stone: of these, Herst-Monceaux, in Sussex, is perhaps the most celebrated;—this may have been partly caused by its destruction, which is unaccountable. Mr. Wilson remarks that—"Had accidental fire, or a siege in the civil wars, reduced it to the mere shell we have now before us, our regret would have been

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softened by reflections on the inevitable fate that, sooner or later, attends all human grandeur. But what can be said of the sordid possessor of such a treasure, who deliberately pulls it to pieces?"—The right of property is unquestionable; but it would have been happy for the memory of the owner, had he considered that the possession of a building which the public admire and value is, in some sort, equivalent to a public trust, and its destruction is sure to be followed by the censure of posterity.

The castle was built A. D. 1440, in the nineteenth year of Henry VI., by Sir Roger Fienes, who obtained a royal licence to enclose six hundred acres of land, and fortify his manor-house. It remained in the family until 1701, when this noble castle was purchased by George Naylor, Esq., from whom it descended to the Rev. Robert Hare, by whom it was completely gutted and reduced to a ruin in the year 1777.

All that now remains of Herst-Monceaux Castle are the gate-house and towers, with the whole of the external walls, which are nearly a square of about 200 feet: these are as perfect as when built, having octagonal towers at the angles, and three others between. The arrangement of the apartments seems, from the account in Grose's 'Antiquities,' to have been on an enlarged and magnificent scale of richness. The hall is spoken of as "resembling those at Oxford and Cambridge, with three handsome rooms at the eastern end, one of them 40 feet long; beyond these were the chapel, and parlours for common use, with rooms for the upper servants. The grand stairs, which lie beyond the hall, occupy an area of 40 feet square. The kitchen, as well as the hall and chapel, goes in height to the upper story of the house." The other chambers were large and numerous; the apartments on one floor were sufficient to lodge a garrison. The windows were of stone, and in every one was painted glass. The towers on each side of the gate-house on the south front are 84 feet high, and very fine in design. This castle, entirely built with brick, is one of the oldest edifices of that material in

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the kingdom (excepting those left by the Romans), as well as one of the most complete, no flaw or crack being observable in any part of it. The walls are of great thickness; the doorways, copings, water tables, and all moulded work, are of stone.

Another of the same class of defensive manor-house as the preceding, though of a later date, is Oxborough Hall, Norfolk; it was built in 1482 by Sir Edmund Bedingfield, a zealous adherent to the House of York, and in high favour with Edward IV., who granted him a licence to build towers and fortifications at his manor of Oxborough.

This mansion is constructed entirely of brick, with the exception of the larger windows and gateway in the entrance tower. The whole of the traceried panels, mouldings, and battlements are either of cut brick or moulded tiles. It is in plan nearly a square of 172 feet, with the buildings entirely surrounding a central court. The hall, 52 feet long and 29 feet broad, and also the principal apartments, were in the southern range, or facing the entrance: these, with the private dining-room and great kitchen, were taken down in the year 1778. The grand entrance gateway remains unchanged, and is a most interesting feature: it is flanked by two octagonal towers 80 feet in height, panelled in six stories, standing forward with a bold projection, and rising from the moat, which entirely surrounds the walls. The approach to the gates is by a bridge of three arches: an arch projecting from the face of the wall connecting the towers, and supporting the battlements, serves for the purpose of machicolations: windows of three and four openings light the rooms over the gateway. In the tower on the right hand of the entrance is a spiral staircase of brick, leading to the top of the building, and lighted by small quatrefoil apertures. The other tower is occupied by four rooms, three of which have covered brick roofs, with projecting ribs.

In its original state, Oxborough Hall exhibited a complete example of a fortified mansion, which, as we have before

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explained, succeeded, and was the last of a class having any similitude to the castles of the earlier times: it was designed with more regard to internal space, convenience, and the improved habits of living, although constructed of sufficient strength to resist any casual hostile assault. Many other examples of dismantled buildings of this date and character still exist in different parts of the country; but as we have chosen the best and most perfect, no advantage would be obtained by further descriptions.

CHAPTER XVII.

THE DOMESTIC AND CIVIL ARCHITECTURE OF ENGLAND OF THE TUDOR AND ELIZABETHAN PERIODS.

We have now arrived at a class of architecture more pleasing in its contemplation than that described in our previous chapter: all the buildings there noticed were erected for a purpose more or less offensive or defensive;—the history of the country, the numerous wars or disputes between kings and nobles, and the unsettled or rather disordered state of society, are written in indelible characters on every stone and brick which remains. However we may be pleased by an antiquarian or historical research into these evidences of past events, and the ingenuity displayed in their erection, still, to the studious mind or to the philanthropist, they are so many monuments recording the sufferings of people by the tyranny of ambition, or else are the records of oppression, domestic broils, and anarchy. Their great attraction to the world at large is the picturesque appearance which their ruinous state presents; but it is to be questioned whether, in the under current of the mind's reflections, another feeling does not arise that imperceptibly assists the charm, viz.

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congratulation at our more peaceful state, and the subversion of customs in which might was often considered synonymous with right and justice. Nothing perhaps forms a more beautiful picture than castellated ruins well covered with vegetation, intermixed and surrounded by trees in all their natural loveliness of form, unindebted to the hand of man for planting or training, and more frequently growing, as in mockery to the founder, in the great halls or state chambers, where but a very few centuries since the frail representative of humanity prided himself on the capabilities which power gave him to persecute his fellow man.

The halls or manor-houses of the reigns of Henry the Seventh and Henry the Eighth retained little of fortified character beyond the battlements with which the walls were surmounted, more for ornament than use (as we find in the churches of this period). The thickness of the walls, size of the windows, turrets, and buttresses, were influenced by their situation or requirements, and without any idea of making the mansion assume an appearance of more than necessary strength. In the arrangement of the plans of the Tudor houses, no systematic principle seems to have been considered, and the position of the rooms was caused by local circumstances: in those of a large scale, the courts were generally surrounded by buildings, as at Haddon Hall, Derbyshire; whilst in others of less pretension there was a gate-house in advance of the mansion, but connected with it by mantle walls: the manor-house, East Barsham, Norfolk, has this appendage.

The style of architecture which prevailed during the latter part of the fifteenth century is more extended, both for its uses and modification, than any other we are acquainted with, and was applied to domestic as well as ecclesiastical structures. The preceding styles had been only employed in religious buildings, with which the castellated ones of the same period had little in common, and had so very few features wherein the general style could at all exhibit itself: they must, therefore, be considered as forming distinct classes of themselves.

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In the ornamental domestic architecture of the fifteenth and sixteenth centuries, generally designated Tudor, (there are very few examples before that period,) we perceive the same style as that of the ecclesiastical buildings applied to another class, where, although the parts are somewhat differently composed, the style of ornament and detail is essentially the same. Some features, such as doorways and porches, are very little altered from those of churches; while others, unknown to the latter class of buildings, such as chimneys and projecting windows, became highly characteristic and decorative in this.* Oriel and bay windows are peculiar to this style: these terms are often used indiscriminately;—the former of these project out in the upper part of a building, and overhang that below, being corbelled upon mouldings splaying downwards on every side: the latter may be similar in openings and ornament, but they rise immediately from the ground, and are connected with the building by the base and string-course mouldings. Oriels are both single and compound, that is, are either confined to one of the upper floors of the building, or carried up through all its stories: of the latter description is the singularly rich one in the entrance tower of Magdalen college, Oxford, built in 1475;—others are to be seen at Windsor. Of the former, we may refer to examples of varied character and degrees of richness at Balliol, St. John's, and All Souls' colleges, Oxford; Windsor Castle; Hengrave Hall, Suffolk; the Chancellor's house, Lincoln; the manor-houses of Great Chalfield and Wraxall, Wilts; the hall of the Vicar's close, Wells; the tribunal-house, Glastonbury; Thornbury Castle, Gloucestershire; and the Deanery, Wells.† Oriel windows are rarely to be found in any buildings but those of the period of Henry the Seventh or the early part of Henry the Eighth; whereas the bay window

* Projecting or bay windows have sometimes been misapplied to churches, as at Spetchley in Worcestershire, and Dorchester, Dorset.

† Illustrations of the greater part of these are to be found in Pugin's 'Examples of Gothic Architecture.'

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was retained until the end of the reign of Elizabeth, and made one of the most important features in the compositions. Bay windows, so called from forming a bay or recess in a room, projecting from the wall either in a rectangular, semi-octagonal, or circular form, do not appear to have been used prior to the introduction of the Perpendicular style, when they were very frequently employed, particularly in halls, where they were invariably found at one end, and sometimes at both ends of the dais: the openings were generally longer than those of the other windows, so as to reach within about three feet from the floor. Some of the finest specimens of the Tudor period are to be found at Hampton Court Palace; the hall of the Palace at Eltham, Kent; Crosby Hall, London; Compton Winyate, Warwickshire; Thornbury Castle, Gloucestershire; Sutton Place, Surrey; Athelhampton, Dorsetshire; Kenilworth Castle, Warwickshire; and Haddon Hall, Derbyshire.

Chimney shafts, which until the latter part of the fifteenth century had not been made of importance, and were generally attached or in pairs, now became one of the principal features by being clustered together and very highly ornamented; they were executed both of stone and brick; examples of the latter material are very numerous; their form was either octagonal or circular: those at East Barsham manor-house, and Thorpland Hall, Norfolk, are richly ornamented with devices; other beautiful varieties exist at Gifford's Hall, Suffolk; Eton college, Buckinghamshire; Hampton Court, Middlesex; and Chesham, Buckinghamshire.

Although chimneys had been long invented, and were much in use for other rooms, our ancestors do not appear to have introduced them generally into their halls until the end of the fifteenth or the early part of the sixteenth century. The previously open hearth, on which the fire was made, was in the centre of the hall, and the smoke escaped through the louvre lantern in the roof: about this period they were added to many halls of an older date.

The general plan, as we have before observed, of the larger

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mansions of the Tudor period was quadrangular, consisting of an inner and base court, between which stood the gate-house: on the side of the inner court facing the entrance, the principal apartments were placed; these consisted of the hall, the chapel, the great chamber and dining-room, and were connected with a gallery for amusements, running the whole length of another side of the quadrangle.* Good examples of this class of mansion are to be found, although many are so altered as to retain but a slight expression of their original state. Hannaker House, near Midhurst, Sussex, was built round a court, with the entrance under an embattled gate-house, flanked by small octagonal towers on the south. A square tower was at the south-east angle; the chapel and other apartments on the east; the hall and principal rooms on the north: the latter contains carving and oak panelling of the time of Henry the Eighth. In a compartment near the centre are the arms of England: over the doors leading from the

* Warton, in 1783, thus describes "a most beautiful and genuine model of a magnificent mansion of the reign of Henry the Eighth, built by Sir Anthony Brown at Midhurst in Sussex:"

"We enter a spacious and lofty quadrangle of stone through a stately Gothic tower, with four light angular turrets. The roof of the gateway is a fine piece of old fret-work. There is a venerable old hall, with a noble oak-raftered roof and a large high range of Gothic windows. Opposite the screen is the arched portal of the buttery. Adjoining the hall is a dining-room, the walls painted all over, (as was anciently the mode soon after the beginning of the reign of Edward the Sixth,) chiefly with histories (out of perspective) of Henry the Eighth: the roof is in flat compartments. A gallery, with window recesses or oriels, occupies one side of the quadrangular court. A gallery on the opposite, of equal dimensions, has given way to modern convenience, and is converted into bed-chambers. In the centre of the court is a magnificent old fountain, with much imagery in brass, and a variety of devices for shooting water. On the top of the hall is the original louvre or lantern, adorned with a profusion of vanes. The chapel, running at right angles with the hall, terminates in the garden with three large Gothic windows."

The same Sir Anthony Brown built also Byfleet House, Surrey: he died in 1548.

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hall to the buttery and cellar are half-length figures of men holding cups: over the head of one, on a label, is LES · BIEN · VENUS; and over the other, COME · IN · AND · DRINGE.*

Hengrave Hall, Suffolk, built in 1538, is another of the fine old mansions with which that county abounds: the date of this is certain from an inscription on the outside of the curious oriel window. An open court occupies the centre of the buildings; this is surrounded on three sides by a gallery, with windows to the court, communicating with all the apartments: the hall (34 feet by 25) is on the other; the bay and two windows, by which it is lighted, look into the court. The apartments are numerous, and their arrangement is, perhaps, more in accordance with modern requirements than we generally find in buildings of this date. The principal front (which is about 160 feet in length) displays a fine picturesque character; indeed, the whole is a unique example of ancient domestic architecture. It is built of brick and stone; the gateway is peculiar and in high preservation; perhaps a more elegant specimen of the architecture of that age can scarcely be seen.

The great halls in the palaces, mansions, and colleges of this period were extremely lofty, frequently predominating over the surrounding buildings: the ceilings and roofs were very boldly constructed and elaborately ornamented.† The most deserving attention are those at Eltham Palace, Kent, built by Edward the Fourth about 1482;—and at Hampton Court, built by Cardinal Wolsey between 1520 and 1540, which is the most florid in its decorations of any in the kingdom, and measures 106 feet by 40, the walls being 45 feet high. That of Christ Church, Oxford, built likewise by Cardinal Wolsey a few years earlier, is much more simple, though scarcely less

* Hunt's 'Tudor Architecture.'

† For a full description of the constructive principles and peculiarities of the open timber roofs of this as well as the preceding style, the reader is referred to the 'Rudimentary Art of Building,' published in this series.

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beautiful;—the size is 115 feet by 40, and 50 feet high. Beddington Hall, Surrey, is another fine example. The roof of Crosby Hall, London, built about 1470, cannot be exceeded in richness of effect, the details of which are of the pure styles of the florid Gothic, and unlike that of Hampton Court, where the Italian or transition style has been partially introduced. The interior of Crosby Hall measures 69 feet by 27; and the height in the centre of the roof about 38 feet. The noblest of the open timber roofs is that of Westminster Hall, erected by Richard the Second in 1395; the hammer-beam and arched rib are its peculiar constructive features: the length of this hall is 228 feet, breadth 66 feet, and height 92 feet. Many other open roofs, more or less ornamented, are to be found in the colleges at Oxford and Cambridge, the inns of court in London, besides others in the country, of which we mention Athelhampton Hall, Dorsetshire, Penshurst Place, and Cobham college, Kent.

The next description of manor-house is that where the buildings were not quadrangular, but arranged in one front, with projecting wings, or else having a porch-tower in the centre. In front of this was an irregular court, formed partly by the house, and by stables or other out-buildings: those of Great Chalfield and South Wraxall are thus arranged, with entrance gate-houses: the former is in a very perfect state, still retaining the elaborately carved oak screen of the banqueting-hall: it is altogether one of the best examples of the latter part of the reign of Henry the Sixth.*

The brick-built manor-houses of this period, so peculiar to the counties of Norfolk and Suffolk, deserve our notice: that at East Barsham exhibits an extraordinary specimen of skilful workmanship, being almost wholly composed of that material; and it is much to be regretted that this curious and extensive fabric should have been suffered to fall into ruins, when a little expense and care bestowed on it, about a century since, would have preserved it: at present, more than half the

* See Pugin's 'Examples,' vol. iii.

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Westminster Hall.

house is roofless, and reduced to a state so decayed and ruinous, that its original form cannot be exactly traced. It was commenced in the reign of Henry the Seventh, and finished in that succeeding. The walls of the principal front are nearly

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on one plane, being broken only by the porch in the centre; and octagonal turrets of different sizes are so distributed as to give a variety of outline to the combination. The hall is to the left of the porch by which it is entered: the great parlour and principal apartments are beyond, or at the back of it. The windows are large, and must have given the rooms a cheerful appearance. The building consists of only two stories, except in one part, where another is added as a tower. The upper string-courses are bold in moulding, and rich in cast ornaments and panels: these are surmounted by moulded battlements, with beautiful traceried panels. The stack of ten chimneys at the west end of the hall, and the turret terminations, are fine in design and execution.

The building, which measures 140 feet by 58 feet, has a gate-house tower about 40 feet in front of the porch (a paved court intervening): on this, if possible, a greater degree of moulding and enrichment has been bestowed;—figures, armorial bearings, battlements, and panelling, are all executed in brick in a surprising manner.

Thorpland Hall, within two miles of East Barsham, is evidently of the same date, and erected by the same party: although it will not bear any comparison as to scale, yet the details and ornaments are in no way inferior. It is a valuable example of the class, and exhibits features well suited to modern imitation. The parsonage-house, Great Snoring, in the immediate vicinity of Thorplands, likewise built of brick, is celebrated for its peculiar richness of design.

In many towns there are considerable remains of houses built during the fifteenth century, both of stone as well as of timber and ornamental plaster: of the former, an inn and tribunal-house at Glastonbury, and another at Grantham, are noted for their elaborate and beautiful arrangement: of the latter class, numerous instances still exist in most of the old cities, Coventry, Winchester, York, Norwich, and at Hadleigh, Lavenham, Ipswich, and many other places in Suffolk and Norfolk.

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We have little evidence of the way in which houses were fitted up until late in the fifteenth century. Tapestries were much in use, but very few specimens remain; those at St. Mary's Hall, Coventry, representing Henry VI. and his court, and Queen Margaret, are good early examples, and in a comparatively perfect state of preservation. Oak panelling generally lined the walls of the halls and larger rooms to one-third of their height; paintings of ornaments, figures, and armorial bearings were likewise adopted for decoration, but few examples remain.* The ceilings of this period were usually of timber, divided into squares, with carved flowers at the intersections, as at Sherborne Abbey, Dorset. Another, at the Deanery, Worcester, has the whole of the mouldings relieved in colour, and on the ground of the square panels roses are painted. The hall at Great Chalfield has its ceiling divided into squares by the main timbers, and at the intersections are plaster bosses, composed of foliage and devices.

Towards the close of the fifteenth century Italian features were continually increasing, and consequently greater variations were observable in the ornamental details at the beginning of the following century. Wainscot came much in fashion: the panels were small, and mostly of what is called the linen pattern; but they were also carved with great variety

* Painting on the walls of rooms is of high antiquity. Henry III., who was a great encourager of the fine arts, kept several painters in his service. One chamber in the palace of Winchester was painted green, with stars of gold, and the whole history of the Old and New Testament. A room at Westminster, and another in the Tower of London, were embellished with the history of the expedition of Richard I. into the Holy Land. The coronation, wars, and marriage of Edward I. were painted on the walls of the great hall in the episcopal palace at Lichfield, in 1312.

"In the famous royal palace of England is a celebrated chamber, on whose walls all the warlike histories of the Bible are painted, and explained by a regular series of texts." During Edward the Third's time, the taste for painting was so great and general, that even the walls of the bed-chambers of private gentlemen were ornamented with historical pictures.

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of design, mixed more or less with Italian details, and frequently in the upper line of panels fanciful heads, placed in wreaths, were carved in high relief. "A great deal of this kind of work yet remains at Tolleshunt Darcy, Essex; Thame Park, Oxford; Boughton Malherbe, Kent; Syon House, Middlesex; and in many other places. Towards the end of this century, planer panels were introduced, sometimes with gilding, as at a house at Hollingbourne, Kent, and also arabesques, &c., in painting, as at Boughton Malherbe. Sometimes the walls had rude paintings, as at Eastbury House, Essex."*

In the early part of this century the main divisions of the ceilings were formed by the girders of the floor above, which were either chamfered or moulded at the angles; and the joists were either bare, but ornamented with mouldings and carved, or else concealed by panels with ribs of oak, divided into various figures, the ground of which, or the spaces between, were both of wood and plaster: of the former class, the ceiling of the old Star Chamber was a beautiful example. At Layer Marney, Essex, Hever and Allington Castles, Kent, instances of the latter are to be found. Ornamental staircases and galleries do not occur until the end of this century.

The timber houses, both in the country and towns, erected during the latter part of the sixteenth and the succeeding century, are often very splendid. The town-halls of Hereford and Leominster, and a house in Ludlow, are very perfect examples of street buildings. The towns of Chester, Shrewsbury, Leicester, Warwick, and Ipswich contain others more or less perfect. The counties of Cheshire and Shropshire are noted for country mansions of this class. Moreton Hall, built about 1559, is a particularly fine example of the arrangement of the timber buildings of this period, and almost wholly composed of wood and plaster. At present it encloses three sides of a spacious court, the south side of which has never been completed, or has been taken down. The bay and projecting

* 'Remarks on Domestic Architecture,' by William Twopenny, Esq.

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windows, surmounted by carved gables, are arranged to form very picturesque features, and filled with ornamental glazing and stained glass. Park Hall, near Oswestry, Shropshire, presents many peculiarities in the plan and decoration of the exterior, differing from the preceding example: it is more uniform in its arrangement, having a projecting central porch and wings at each end: bay windows are here introduced: the centre of the building, as well as the greater part of the wings on the ground and first floors, comprises one continuous window, interrupted only by the projections and mullions, but having no piers: the portions not used as openings display the ornamental framing filled in with plaster. Ockwells, Berks, near Windsor, is a most interesting specimen of the half-timbered mansions of the time of Henry VI. and Edward IV. The windows are less united than those of the later date, and the mullions are connected by arched heads; the gables in particular are very beautiful. Bramhall Hall, Cheshire, is another of these remarkable buildings, retaining the peculiarity of the front presenting the appearance of one continuous window on each floor: the glazing is very varied in pattern, and enriched by circles of stained glass.

As multiplying examples of buildings retaining similar features and combinations would not assist our inquiry, we shall proceed to the consideration of the styles which succeeded.

Scarcely any English sovereign, with the exception of the first two Georges, did less in direct patronage of the arts and architecture than the Queen whose name has been attached to a style which has been more generally followed in this country for domestic buildings than any other; for, with the exception of the royal gallery at Windsor, she herself, in a forty years' reign, did actually nothing. Elizabeth, therefore, does not appear to have inherited any taste or passion for architecture from her father; or, if she did, the thought that her father had done sufficient in building palaces might have hindered her from exercising it: of one thing we are certain,

she at least encouraged the nobles of her court in great expenditure on their residences;* and their example was so generally followed, that in this reign more ornamental and substantial houses were erected than in any other before or since.

The decline and ultimate extinction of the Pointed style of architecture, and the introduction of a class of art hitherto unknown in England, cannot justly be attributed either to the dissolution of religious houses, the alteration in ceremonies, or even to the suppression of the ancient faith, as some would make us believe. It must be borne in mind that a positive change in the arts of design, as applied to ecclesiastical buildings, had taken place in France and Germany, where the religion remained unchanged, at least half a century before it was visible in our own country. We are free to admit that, whilst art was in the hands of the Catholic clergy of this country, it flourished vigorously; still its expression and ornamentation were constantly varying. The Perpendicular style had its transitions, and some which must clearly convince us that even when there was no prospect of a change of the forms of religion, the style was becoming debased, and the principles of Gothic art neglected.

Architecture and the arts had revived in Italy in the fifteenth century, and the style most adopted there was enriched with imaginary and fantastic representations of animals, birds, fruit, and foliage; the walls were covered with designs of an ornamental nature, in which fancy was occasionally excited to its utmost scope; in short, every variety of detail and general design was introduced. The immense patronage which the arts received at this period in all parts of Italy had the effect of producing an extraordinary amount of talent, which became celebrated throughout Europe, and originated a demand for that style of architecture which hitherto had not been practised north of the Alps.

* The Earl of Leicester expended on Kenilworth alone no less a sum than £60,000.

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The desire for change and variety seems nearly inseparable from the human mind, and mutability has been the rule of all things under the sun, since first the earth was gladdened by its rays; yet still progression or retrogression has more generally been gradual: unfortunately, in the history of art and architecture, the latter has invariably been marked by additional speed towards its end. This most assuredly was the case with the architecture of the last Pointed period; a century had been taken to perfect it, and less than a quarter of one was only needed for its debasement and total extinction in this country.

The constant intercourse with the Continent during the reign of Henry VIII. had its influence on the arts of design. At this period, in France, the Netherlands and Germany, styles were practised having the features of the cinque cento; or the renaissance of Italy, blended on the class of architecture which had previously prevailed in each country. Thus arose three new styles;—that in France, during the reign of Francis I. retained the features of Gothic designs, but was enriched with Italian details, and has been deservedly celebrated for the elegance and excellence of its forms, and the exquisite execution of its ornaments. From this source came much of the classic detail so perceptible in the latter works of Henry the Eighth's reign.

The reign of Elizabeth is remarkable for the introduction of a style of domestic architecture more systematic in plan, more commodious in its arrangements, and imposing in its effects, than any preceding. Up to this period the mansions of the nobles were only one story in height, and in plan greatly deficient in the requirements incidental to the improved social condition. Indeed, the domestic architecture under Elizabeth had assumed a more scientific character, and we have ample evidence that no building was now undertaken without the previous arrangement of a well-considered plan. Books on the arts of design and construction were now published, and architects had begun to act upon a system in the construction of the palatial houses of the aristocracy. The principal de-

viation from the plans of the Tudor houses was in the frequent introduction of bay windows; the improvement in the galleries, which were now generally lofty, wide, and more than 100 feet in length; that of staircases, from being small and inconvenient, to occupying a considerable portion of the mansion, and communicating with the entrance or staircase halls of spacious dimensions. The exteriors of the porticoes and parapets were greatly enriched with carved entablatures, columns, pilasters, figures, armorial bearings, and every variety of device which the most fantastic imagination could supply.

To houses of this date, terraces of great grandeur were generally attached, connected with each other by broad flights of steps;—they were bounded by richly perforated parapets or balustrades. The windows retain more of the Gothic character than any other feature; they were divided by mullions and transoms, although their height, as well as width, was generally much increased: in some examples there are three and four tiers of openings, diminishing in height as they ascend.

The Italian Orders are much introduced, but their classic proportions not attended to: the columns, pilasters, and piers are usually banded in several courses by square blocks, which are constantly decorated with diamond or jewel-shaped projections: this ornament is of very frequent occurrence, and may be considered as a distinct characteristic of this style. The entablatures are more usually broken, either by projecting profiles or scrolled and voluted ornaments. The bay windows, parapets, and gables are terminated in general by perforated ornaments of either a square, circular, or scroll form.

This singular manner of designing must be examined to be well understood; no description can possibly convey a just idea of its complex forms and elaborate ornaments. There perhaps is no class of English architecture more compounded of inconsistencies, defects, and beauties, than this mixture of Gothic and Italian; but to be properly appreciated, it should be studied with a mind unbiassed alike by the tendencies of a previous education and the indiscriminating caprices of

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fashion. The application of this style to country mansions is unquestionably not to be equalled by any other, as its varied forms of plan and outline will either harmonize or contrast beautifully with scenery of any description.

One of the most celebrated architects of the reigns of Elizabeth and her successor was John Thorpe, who designed and erected most of the principal palatial edifices of the time. The general form of his plans is that of three sides of a quadrangle, and the portico in the centre. When the quadrangles were used, they are surrounded by an open arcade or corridor. As his designs are not distinguished by any peculiarity differing from those already described, we will only mention the names of some of his principal works: Holland House, Middlesex; Longford Castle, Wilts; Wollaton Hall, Notts; Audley End, Essex; Kirby, and Burleigh House. Bernard Adams and Lawrence Bradshaw, Robert and Huntingdon Smithson, were also eminent architects of this period.

The best architecture of this style may be seen at Westwood, Audley End, Hatfield, Wollaton, Burleigh, and Hardwick Hall; very many more buildings have beautiful and most elaborate features: in some, the staircases and screens; in others, the entrances. The plaster ceilings of the Elizabethan date are particularly deserving of attention, on account of their richness and beautiful arrangement: the fire-places, panelling, cornices, friezes, and ornaments of the principal apartments were extremely varied, and generally good in design. Crew Hall, Bramshill, and Knowle, retain good examples of these.

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CHAPTER XVIII.

THE INTRODUCTION OF ITALIAN ARCHITECTURE INTO ENGLAND.

FROM JAMES I. TO THE PRESENT PERIOD.

THE early part of the seventeenth century, during the reign of James the First, is the period of the introduction of unmixed Italian architecture into England: it is to be attributed to the genius of Inigo Jones, who, in the early part of his professional career, had erected and altered several large buildings in the mixed style, which continued to prevail until his masterly designs of the Venetian school caused a general admiration and adoption of this class of art. Little is known of Inigo Jones or his works as an architect previous to 1605, when James the First visited the university of Oxford, at which time he was employed on the quadrangle at St. John's college, and had been to Italy: from that time until his second visit the buildings on which he was engaged were of a mixed or transition character; when by a careful study of the works of Palladio, he perfected his taste, ripened his judgment, and laid the foundation for his future well-merited reputation. On his return to England he was appointed to the office of Surveyor of Public Buildings, and from that time his fame and practice rapidly increased.

Inigo Jones.

The banqueting-house at Whitehall, begun in 1619 and completed in two years, is justly considered one of the most

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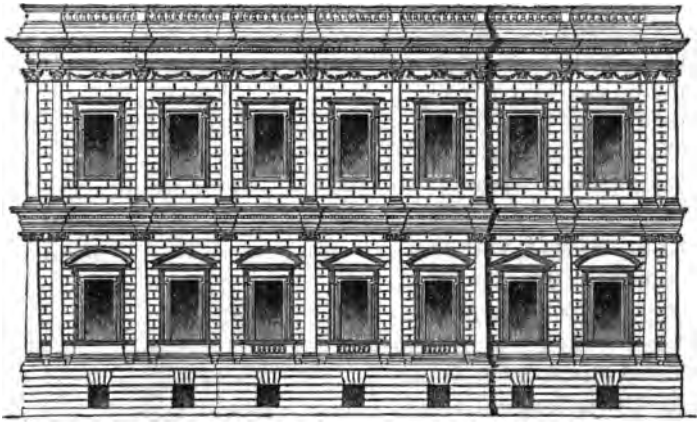

Banqueting-House, Whitehall.

beautifully proportioned buildings in Europe. It is of the pure Italian style, and was but an inconsiderable portion of a magnificent design for a palace, which in magnitude would have exceeded the palace of Diocletian. In plan it was an oblong square, subdivided into seven courts; and would have extended from the park to the river: the latter front of 720 feet, as well as that towards Charing Cross extending 1152 feet, would from their scale alone have been imposing. The banqueting-house (the only part finished), now used as a chapel, is the largest room in England (Westminster Hall excepted), it being 115 feet in length, 60 in breadth, and 55 in height.

The garden front of old Somerset House, erected in 1623, was a work of great beauty, (and on its demolition was partially copied by Sir W. Chambers for the street front of the present edifice.) The portico of old St. Paul's, London (p. 154), built in 1633, was likewise his design; and although we may question the taste of adding a Roman portico (however well proportioned) to a Gothic cathedral, still it is perhaps less objectionable than attempting a style whose beauties and principles even the genius of Jones could not appreciate.

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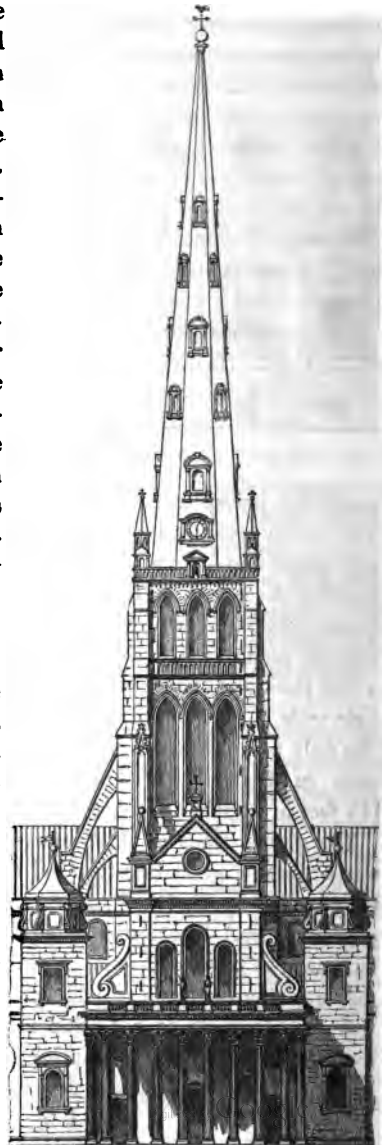
Jones also erected the York Stairs at the end of Buckingham Street in the Strand, (formerly in the gardens of the Duke of Buckingham,) in 1626. The façades of this building were of the Tuscan Order, divided into three openings: that in the centre, used for the passage and stairs, is wider than the other: on the river side, four half-columns are attached to the walls, and support an entablature, which is broken above the capitals: over the archway is a segmental pediment, having its tympanum ornamented with a shield. The façade next the street is similar in its combination, with the exception that the piers are ornamented with pilasters instead of columns. This building, though small in dimensions, is much admired for its boldness and propriety of character.

The church of St. Paul, in Covent Garden, built from the designs of nes, is interesting from



West Front of Old St. Paul's.

its being the only specimen of the Tuscan Order similarly applied, and is intended to exhibit the proportions of the temples of that class as they are described by Vitruvius: the whole building is of a very massive character, and may be considered as particularly applicable to its situation. The plan is rectangular,—of 133 feet long, including the portico, and 66 feet wide; the height from the ground to the cornice is 35 feet. The façade consists of a pedimental portico, supported by two columns of the Tuscan Order, between the antæ pilasters.

The numerous works executed by Jones have received, at different times, both praise and severe criticism: it must be admitted that his admiration of Palladian architecture sometimes led him to adopt plans and arrangements for houses not altogether suited to our climate or habits, and to aim at a splendour of design, which, under circumstances, could not be accomplished. The combination of his windows was Italian, and the piers between them were frequently so large as to offer too much obstruction to the admission of sufficient light. Objections have been offered to the height of his roofs, and the unmeaning, as well as useless, introduction of porticoes in the centres of his façades. The encouragement received by Inigo Jones was brought to a close by the misfortunes of his royal patron: art or artists found so little favour or encouragement during the time of the Commonwealth, that, unmindful of his talents, he had to pay £545 as a penalty for being a Roman Catholic. Disappointment and trouble accelerated his death, which took place in 1651.

The fire of 1666, which destroyed nearly the whole of London, was the occasion to which Sir Christopher Wren was indebted for the opportunities of displaying his skill in architecture and constructive science. One of his first designs was that for the rebuilding the city on a regular plan, which unfortunately was never carried wholly into effect,—and is the more to be regretted, as we then should have been spared the inconvenience resulting from our present bad arrangement.

The task of re-erecting the cathedral of St. Paul and the greater part of the churches in the city was intrusted to Wren, whose distinguished talents were fully equal to the stupendous undertakings. No architect, before or since his time, has possessed such a variety of knowledge, both in design and construction: the multiplicity and magnitude of his works proclaim the universality of his genius. The same hand produced the noblest of modern cathedrals, the largest palace, hospitals, and numberless public and private buildings, besides twenty-five churches in the city of London. Great length of days were bestowed on him: "he lived to enrich the reigns of several princes, and disgraced the last of them;"—(at the advanced age of 86 he was removed by George I. from the office of Surveyor-General;)—"he restored London, and recorded its fall;"—he designed and lived to complete a building which is the boast of England and the admiration of the world, of which a general description is all that we can give.

The cathedral church of St. Paul stands on a greater portion of the site of the old one; the designs were approved by Charles II., and the warrant issued for the execution of the works on the 1st of May, 1675. The first stone was laid on the 21st of June, 1675: within ten years the walls of the choir and aisles and the north and south porticoes were finished, and the piers of the dome were brought up to the same height. The highest stone on the top of the lantern, which was the last, was laid by the son of the architect, in 1710. The whole edifice was completed in thirty-five years, having only one architect, one master-mason, and the see being occupied the whole time by one bishop.

The plan of St. Paul's is a Latin cross, measuring from east to west 480 feet; its general breadth on the exterior is 125 feet, and from the north to the south ends of the transepts 280 feet. The western end of the edifice is flanked by towers on the same plan as the walls, but projecting 27 feet beyond the north and south walls, thus making the whole width of

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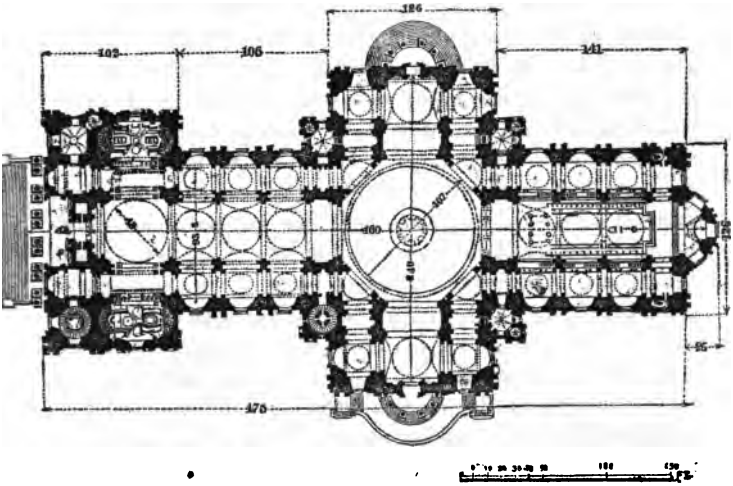

Plan of St. Paul's.

the façade 180 feet. The exterior of the building consists of two Orders;—the lower, or Corinthian, stands on a basement 10 feet above the ground, which is the level of the church, which on the western side is approached by a magnificent flight of marble steps, extending nearly the whole breadth of the front. From this level to the top of the entablature, or the whole height of the Order, is 50 feet; and from this to the upper part of the second Order, which is Composite, is 40 feet; thus making the whole height of the body of the church 100 feet from the ground. A magnificent portico, of the two Orders in height, ornaments the western front; the lower story consists of twelve coupled columns, and the upper of eight, besides four pilasters: this portico is surmounted by a pediment, on whose tympanum the subject of the conversion of St. Paul is sculptured in high relief. At the ends of the transepts are porticoes, in form of a segment of a circle, round which are six fluted Corinthian columns; this is crowned by a half-dome, resting against the wall of the building.

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The height of the cathedral, from the pavement to the opening of the inner dome (which is of brick-work), is 168 feet, and its diameter 100 feet. On the haunches of this dome, at 200 feet from the pavement, rests the base of a cone of brick-work, the top of which is 285 feet from the level of the church: this carries a stone lantern 55 feet high, terminating in a dome, and above this is a ball and cross. The external dome is of oak, covered with lead, and is supported by horizontal and vertical timbers resting on corbels fixed in the brick cone. The lateral thrust of the cone and the interior dome is restrained by four tiers of strong iron chains, bedded with lead in grooves cut in the masonry at the base and at different heights on the exterior of the dome. The towers at the extremities of the western front are 220 feet high, and ornamented with Corinthian pilasters, terminating above the roof of the church in open lanterns, and covered with domes. On the exterior of the building, the intervals of the columns and pilasters are occupied by niches or windows with semi-circular or horizontal heads, and crowned by pediments. In the upper Order of the north and south sides there are no windows, as it is merely a screening wall to the nave.

This edifice may, for elegance of design, bear comparison with any in Europe, not even excepting St. Peter's at Rome, though it is far from being so large. It must be admitted, however, that the interior faces of the walls present a naked appearance, and require much embellishment from ornamental sculpture before they will harmonize with the richness of the exterior. A great defect also arises, in the interior, from the want of connection which is caused by the arcades interrupting the entablatures. Sir Christopher Wren appears to have surpassed all those who preceded him in the skill required for raising a building on the minimum of foundation. Some criterion may be drawn of the comparative skill employed in the construction of other buildings somewhat similar, by comparing the ratio between the area of the whole plan and that of the sum of the areas of the whole of the piers, walls,

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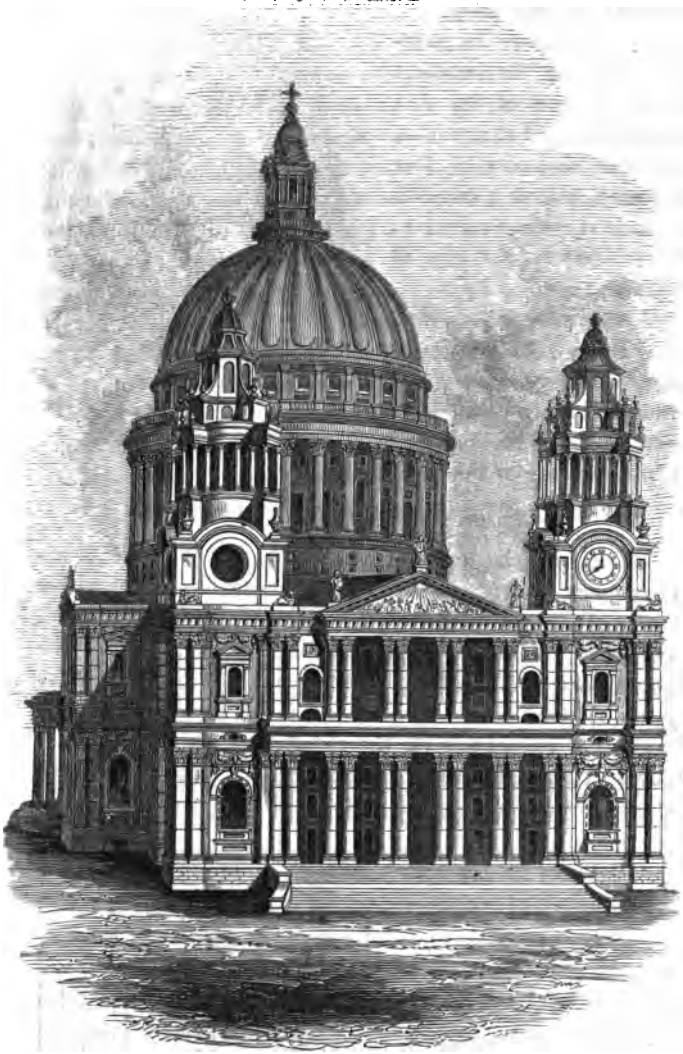

Western view of St. Paul's, from Ludgate Steeple.—Page 159.

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and pillars which serve to support the superincumbent mass. To produce the greatest effect by the smallest means is one of the first qualifications of an architect, and the similarity of four churches affords a criterion of their respective merits as to the least amount of solid for area.*

Sir Christopher Wren.

Wren lived to complete St. Paul's (which cost £736,752, exclusive of the stone and iron enclosures round it, which cost £11,202): he died in 1723, at the age of 91, and was buried under the fabric,—with four words—

SI QUÆRAS MONUMENTUM CIRCUMSPICE.

To describe the works of Sir Christopher Wren would occupy much space; we must therefore content ourselves with a notice of some of his principal buildings. Besides the great work just mentioned, he designed or executed most of the public edifices of his time: that upon which his fame is as justly founded as St. Paul's itself, is St. Stephen's church, Walbrook, remarkable for the elegance of its interior ornament. Its plan is a rectangle, 82 feet long by 59 broad, with a semicircular recess at the eastern end. It is divided longi-

* We borrow Mr. Joseph Gwilt's table of their proportionate areas.

Church.	Whole area in English feet.	Area of points of support.	Ratio.
St. Peter's at Rome	227,069	59,308	1 : 0·261
Sta. Maria del Fiore, Florence .	84,802	17,030	1 : 0·201
St. Paul's, London	84,025	14,311	1 : 0·170
St. Genevieve (Pantheon), Paris	60,287	9,269	1 : 0·154

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tudinally into five aisles by four rows of Corinthian columns on pedestals; but near the centre, the places of four columns are unoccupied, and on the entablatures of the columns which are left, eight semicircular arches are turned, on the spandrils of which are pendentives forming the circular base of a dome, which rises in the shape of a segment of a sphere; and on the top of the dome is an elegant lantern. This church owes its reputation to the merit of the interior: the confined situation of the building among the neighbouring houses rendered an ornamental exterior unnecessary.

The lofty tower and spire, so peculiar to the Gothic churches, appears to have been considered by Wren as an essential characteristic and ornament of an ecclesiastical edifice; he therefore, in the greater part of his city churches, adopted their vast height and pyramidal form, to which he gave Italian details and features, so as to accord with the architectural combinations of the body of the building. The most remarkable of these towers is that of St. Bride's church in Fleet Street, which is 226 feet in height, and exceeds that of any other church executed according to the Roman Orders of architecture, and indeed most of the Gothic ones in this country. Its height was 234 feet, before it was struck by lightning in 1764, when, in repairing, it was reduced to its present dimensions. Bow church, likewise by Wren, has a tower and spire of noble proportions: the entire height from the ground is 197 feet, the tower alone being 32 feet broad and 83 feet in height. The upper part of the tower of the church of St. Dunstan in the East is remarkable for its being similar to that of the Gothic churches of St. Nicholas, Newcastle, and the High Church, Edinburgh.

The Monument of London, erected between the years 1671 and 1677, is a well-proportioned work, and exceeds in loftiness any of the historical columns of the ancients: its height is 202 feet, the lower diameter on the upper part of the base is 15 feet, and the pedestal is 21 feet square.

The works of this extraordinary architect are numerous

and varied in design, and we here give a list of his principal buildings and churches:

	Begun.	Completed.
Palace of Greenwich	1663	
Theatre at Oxford	1663	1669
The Monument	1671	1677
Temple Bar	1670	1672
St. Paul's Cathedral	1675	1710
Library at Trinity College, Cambridge	1679	
Campanile of Christ Church, Oxford	1681	1682
Ashmolean Museum, Oxford	1682	
Palace at Winchester	1683	unfinished.
College of Physicians, (the old)	1689	
College at Chelsea	1690	
Palace of Hampton Court	1690	1694
Towers of Westminster Abbey	1696	
Greenwich Hospital.		

CHURCHES.	Time of erection.	Cost. £.
Allhallows the Great	1697	5641
Allhallows, Lombard Street	1694	8058
St. Andrew Wardrobe	1692	7060
St. Andrew, Holborn	1687	9000
St. Antholin	1682	5685
St. Bride	1680	11,430
Christ Church, Newgate Street	1687	11,778
St. Clement Dane's	1680	8786
St. Dionis Backchurch	1674	5737
St. Edmund the King	1690	5207
St. James, Garlick Hill	1683	3357
St. James, Westminster	1689	8500
St. Lawrence Jewry	1677	11,870
St. Michael Royal	1694	7555
St. Martin's, Ludgate	1684	5378
St. Mary-le-Bow	1673	8071
,, The Steeple	1680	1388

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CHURCHES.	Time of erection.	Cost. £.
St. Margaret, Lothbury	1690	5340
St. Mary Somerset	1695	6579
St. Mary, Aldermanbury	1677	5237
St. Olave Jewry	1673	5580
St. Magnus, London Bridge	1676	9579
St. Peter, Cornhill	1681	5647
St. Swithin, Cannon Street	1679	4687
St. Nicholas, Cole-abbey	1677	5052
St. Vedast, Foster Lane	1674	
St. Dunstan's in the East.*		

Front of Christ Church College, Oxford.

* A description of some of the churches in London, including those of Sir Christopher Wren, and of his successors, Hawksmoor and Gibbs, with several illustrations, is given as an Appendix to the present edition of this work.

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FROM THE TIME OF GEORGE I.

The beginning of the eighteenth century was remarkable for the introduction of a style of building quite at variance with that previously practised; its author, Sir John Vanbrugh, was evidently determined not to be controlled by any rules of architectural composition, but to give an expression in accordance with his own convictions. His buildings were combinations of novel forms and peculiarities, which were imperfectly understood by the world at large, and therefore have been subjected to more severe criticism than the works of any other architect.

Sir Joshua Reynolds, however, looked on the censured buildings with the feelings of a painter, and praised the composition of forms, the effects of light and shade, and the magnificence and picturesque character of the architecture of Vanbrugh.

Blenheim House, Oxfordshire, erected in 1715, is the principal work of this architect, and may be considered as a specimen of the style of building of which we have been speaking. The prevailing defect of this edifice is a want of unity and harmony of design; each feature of the principal elevation is distinct in character, and thereby, in composition, disconnected from the others: its immense scale and massiveness may give it an appearance of grandeur, but at the same time a monumental solemnity, somewhat out of place in a palatial residence or nobleman's mansion.* The whole extent in length is 350 feet, and its breadth 200 feet.

Castle Howard, in Yorkshire, likewise by Vanbrugh, was commenced in 1702, and possesses much greater simplicity in the design than Blenheim. He likewise erected spacious mansions at Eastbury in Dorsetshire; King's Weston, near Bristol; and at Grimsthorpe in Lincolnshire.

* It is recorded as "a *monument* of the victories of Marlborough, raised by a grateful nation:" this has been successfully carried into effect.

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It is somewhat extraordinary that Wren, during an extensive professional practice, lengthened beyond that of any other architect, should have imparted so little of his precepts or talents: whatever may have been the number of his pupils, but one only became celebrated, and that pupil was Nicholas Hawksmoor, who had assisted his master in some of his buildings, and afterwards practised on his own account. The church on which the skill of Hawksmoor has been most successfully displayed is that of St. Mary Woolnoth, Lombard Street,—commenced in 1716, and finished three years afterwards,—the design of which has been considered to be scarcely inferior to the best productions of his master. The plan is nearly a square; in the western angles are the stairs to the galleries. The external appearance is very bold in character, and the rusticated niches good in proportion: in point of construction, there is an undue ratio of points of support to the superficies, and consequently an unnecessary employment of materials. St. George's, Bloomsbury, was not so happy a production; for by making George I. really the head of the church, in placing him on the top of the steeple, with lions and unicorns scrambling at the corners, the architect has subjected his design to much severe criticism. Hawksmoor likewise erected the churches of Christ-church, Spitalfields; St. George, Middlesex; St. Anne, Limehouse; part of All Souls' college, Oxford, and the new quadrangle at Queens' college, besides many private works, and was associated with Vanbrugh at Blenheim, and Castle Howard: he died at the age of seventy, in the year 1736.

About the same period the genius of the Earl of Burlington was displayed in the improvements of the mansion in Piccadilly which bears his name, the erection of a villa at Chiswick, &c. He directed his studies to the remains of the ancient architecture of Italy, and the works of Palladio: his designs were not numerous, but very correct in taste: he died in 1753.

The next architect of any note was James Gibbs, to

whom London is indebted for several harmonious and good proportioned churches,—who, if he had not the genius of some architects who had preceded him, was most assuredly an artist of very considerable talent. The church of St. Martin in the Fields, completed in 1726, is the most distinguished monument of his taste and skill:* the length is 137 feet, not including the portico, which is 24 feet deep, and the extreme external width 79 feet. The Corinthian Order has been followed throughout the portico, which projects boldly, is well designed, and is unequalled in London: attached pilasters of the same Order ornament the exterior of the side walls, and stand on a plinth level with the pavement of the portico, which is approached by a flight of steps. The churches erected by Gibbs are subject to one objection, which is in the tower and steeple being raised over the body of the building, so that it appears to stand on the roof, instead of resting on the ground: the propriety of this structure may be questioned; but when a portico is introduced, it is difficult to point out any other arrangement which would display the same uniformity. The church of St. George, Hanover Square, by the same artist, resembles externally that of St. Martin, to which it is equal, but the interior composition is not quite so satisfactory. The church of St. Mary-le-Strand, although carefully designed, is too much cut up by detail, and wants breadth of effect. The Radcliffe Library, at Oxford, which was completed in 1747, tended to increase the fame of Gibbs, as he afterwards received at that university the degree of Master of Arts. St. Bartholomew's Hospital, London, was likewise one of his works.

We will briefly draw attention to the architects who succeeded Gibbs, and whose works are deserving of notice. Colin Campbell, who published three volumes on the principal buildings in England, entitled 'Vitruvius Britannicus,' was an artist of merit, and erected Wansted House, Essex, in 1715. William Kent, who died in 1748, was an architect of some

* The cost of this building was £33,017.

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celebrity: among his public works we may mention the Horse Guards, and the buildings in Margaret Street, Westminster, now containing the law courts. His greatest work was Holkham Hall, Norfolk, erected for the late Earl of Leicester.

Passing over some names little known, we arrive at the reign of George III., during which period architecture was much cultivated, although it cannot be attributed to the direct encouragement given to architects by the sovereign or to any show of taste or study of their art. The first, in point of date, of the successful professors of the art, was Robert Taylor (afterwards knighted), who retained for a long time an exalted reputation; but as his talents were chiefly devoted to numerous private buildings and some mansions which are little known to the public generally, we shall not enumerate them. Sir Robert Taylor died in the year 1778.

The celebrated authors of the well-known 'Antiquities of Athens,' Stuart and Revett, were contemporaneous with the last-named artist, and by their labours gave a more correct knowledge of the buildings of Greece, as regards their composition and ornamental arrangement; but unfortunately it is to be doubted whether the science of architecture was not injured, and its progress much retarded, by the fashion for everything Greek which followed this publication. It is certain that, without any consideration as to the nature of the building, or its purpose, absurd and diminutive imitations of the porticoes of the temples of Greece were for a time considered by the public at large as necessary appendages; and when they could not possibly be introduced on the ground floor, absurdity was carried to the extreme by placing them in front of the floor above. The lengths to which this error was carried were so palpable, that it corrected itself, and so-called Greek designs were no longer required.

The chapel and infirmary to Greenwich Hospital, Lord Anson's house in St. James's Square; Belvedere, in Kent; part of Lord Spencer's house in St. James's Place, and a

house in Portman Square, were the chief architectural work of James Stuart, who died in 1788. Revett was less successful; a few additions of porticoes to mansions, and a church in Hertfordshire, were the extent of his practice.

As a contrast to the pure style which the last-named architects had endeavoured to introduce into the edifices of this country, we have to mention that which was brought into fashion by Robert Adams, whose corrupt taste had invented a style which contained all the worst peculiarities of the worst class of ornamentation and composition: this had its numerous admirers, and unfortunately it was extensively practised. In some happy hour he is stated to have made one design of merit for Lord Scarsdale, viz. Kedlestone, which he carried into execution, and as a whole it is considered to be a splendid composition. He likewise was engaged at Luton for the Earl of Bute, for Lord Mansfield at Hampstead, and other places: he died in 1792, at the age of ninety-four.

Sir William Chambers.

The only architect of the past generation to whom, in concluding this chapter, we propose to direct attention is Sir William Chambers, who was unquestionably the most eminent artist of his day; and in his capacity of instructor in the fine arts to George III., used his utmost endeavours to direct the taste of that monarch so as to obtain for his profession the royal patronage. Unfortunately, the wars in which this country was constantly engaged may have hindered a proper consideration of the arts of peace. Sir William Chambers, however, was extensively employed in all parts of Great Britain; but his noblest effort was Somerset House, which was magnificently conceived,

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and evinced, more than any other of his works, his consummate skill in the art of design.

This building stands on an area of 800 feet in width by 500 feet in depth, and is disposed on the four sides of a rectangular court, (with a street running from north to south on the eastern and western sides,) the interior length of which is 319 feet from north to south, and 224 feet in breadth: the façade towards the Strand is 133 feet long, and consists of three stories: nine arches are assigned to the basement, whereof the three in the centre are open, and lead to the great court, besides having entrances to the apartments of the societies: the other rusticated arches are occupied by windows decorated with pilasters, entablatures, and pediments. Above this story are two tiers of windows, of which those in the lower tier have entablatures, supported by Ionic columns: the upper windows are square, and are surrounded by square architraves. Between these windows, the walls are ornamented with three-quarter columns of the Corinthian Order, standing on pedestals: the height of the Order, without the pedestals, is 23 feet, and that of the entablature is 5 feet. Over the three central compartments of this façade is an attic story, with oval windows and statues in front: the entire height from the ground is 62 feet. The front towards the river Thames is 350 feet long, and presents a magnificent appearance. Its arrangement corresponds with that of the quadrangle, but a superior boldness of character has been adopted in its centre wings, where disengaged columns with pilasters are introduced. The centre part of this building is crowned by a cupola. Before this façade is a terrace 50 feet wide, supported by a lofty arcade, and protected by a balustrade. In the centre is one great semicircular arch, for the admission of vessels from the river; and near each extremity is a water-gate of a similar form, the piers of which are ornamented with rusticated columns. This terrace was originally intended to have extended 1100 feet.

To Sir William Chambers we are indebted for one of the

best written works on the decorative part of civil architecture, published in 1759, in which a variety of designs for the different members of an edifice are exhibited and described. In the edition of 1825, by Mr. Joseph Gwilt, an outline of Grecian architecture has been added, thus rendering the original work complete. This work has been deservedly popular, and continues to be a text-book for the student. Chambers commenced Somerset House in 1776, and died in 1796.

MODERN ARCHITECTURE.

For the object of this inquiry, it will only be necessary to enumerate a few of the works of the architects of the reigns of George III. and George IV., without any comment on their peculiarities of design: a reference to a work on the Public Buildings of London will supply this omission, and save an extension of our remarks.*

Dance, who was architect to the corporation of London, built Newgate, St. Luke's Hospital, the Mansion-House, and many other buildings in the city. Holland erected Carlton House and Drury Lane Theatre, neither of which now exist. Milne was the architect to Blackfriars' Bridge. Sir John Soane re-faced the Bank of England, and erected numerous buildings. Wilkins built the London University, the National Gallery, and the University Club-house. And last, although not least in the list of past architects, is Nash, who undoubtedly may be considered as the originator of a new class of arrangement in street architecture, and to whom, on account of his bold and masterly conceptions and improvements, London owes more than to any architect since the time of Wren: criticism has been too often unduly exercised on his works, which in some instances, in mouldings and details, are faulty; but when we consider the low state of architectural

* The reader is referred to Britton and Pugin's 'Illustrations of the Buildings of London.'

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taste at the period of his career, and the immensity of the works on which he was engaged, his imperfections ought to be forgotten in our admiration of his mental energy and unceasing industry and exertion.*

As there is no style of Architecture peculiar to the nineteenth century, but those of all times or countries are practised with more or less success, we must now bring our history to a conclusion. We purposely avoid the unpleasant task of criticising separately the works of our contemporaries, to whom, perhaps unintentionally, we might be unjust, in consequence of being not fully acquainted with the difficulties attendant on their designs. Besides, many of the most glaring faults which are observable in the buildings of the present day, are to be attributed as much to the working of a bad system as to bad architects;—the one has produced the other. The noble art is degraded and crushed by the combined action of competitions, contracts, and pinching calculations, which are most unfavourable to the scientific man, whose sole aim is to produce harmonious, artistic, or original compositions, which would confer honour on himself and his country.

The present system of selecting a design from a large number submitted in a general competition (all purporting, of course, to be in conformity with the instructions) is mostly favourable to the unprincipled and incompetent artist, whose professional dishonesty is too frequently successful, and he is chosen to increase the list of monuments of bad taste or parsimony, for which this country, more than any other, is so celebrated. The selection thus made is more generally influenced by the greater amount of ornamental features, and not by the superior composition of the design: it matters little if the ornaments are inappropriate, meretricious, or unequally distributed, or to what extent three sides of the

* The fate of the dead lion was Nash's: the difficulties attendant on the building of the new streets were of such a magnitude as few men could have contended against;—these and his good works have been forgotten, whilst small imperfections are noted.

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building are inpoverished or starved, so that the principal façade looks rich: in short, the quantity of enrichment seems to be the main object, without consideration as to its consistency for the purpose or situation of the building. The details of cathedrals, royal chapels, palaces, and princely mansions, are borrowed to disguise hospitals, schools, asylums, training colleges, and even work-houses. This dishonesty in the expression of a building, and the ignorant introduction or bad execution of useless ornament, seems to be sanctioned by custom, and is daily perpetrated;—success stimulates the empiric to proceed in his career, and the public taste becomes infected by his productions. May we not partly consider it as a sign of the times, when the unrealities, inconsistencies, and shadows of the art of architecture, are chosen in preference to works of sound judgment and sterling merit? or must we blame the fatality which too frequently permits some influential member of a committee to propagate his own mistaken views of architecture? Of all the buildings thus erected, how few are satisfactory, even to the selectors of the designs, who, as they have no funds to undo, have the consolation that their participation in the work is soon forgotten;—and time, which equalizes all things, spares the noble buildings of past centuries, to visit with more rapid decay the imperfect productions of the present. The names of the ancient builders have passed away in the lapse of centuries and the multitude of eventful changes, but their honoured works remain to us; whereas many of the works of the present day do not outlive their originators, who thus fortunately leave no record behind them.

From the errors of this system another has arisen, which, in ecclesiastical buildings, seems to hinder all advance in art: precedent is now the only rule, and from which it is heresy to depart;—"that which has been shall be," without consideration as to whether it may or may not be perfect. The criterion of an artist's merit, or the groundwork of his fame, consists in servile copies of ancient examples, and too frequently in the

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introduction of features for which, by the change of our religious ceremonials and forms, there is not the least use.* The only requirement of an architect of the present day (so far as the erection or restoring of churches is concerned) seems to be a knowledge of the varieties of details of the Gothic buildings, which he is allowed to put together in any way he likes; for, according to the views of certain societies, they must of themselves produce a good building. Now if the letters of the alphabet of architecture, thus jumbled together without system or principle, are not generally unsuccessful in their combination, what noble results might we not expect to follow a proper study of the works of our ancestors, and a discovery of the essential elements of their art! Then would buildings be designed on the principles which brought to such perfection the works of the fourteenth century, and we should have harmonious compositions, instead of bad copies of the patched and mutilated erections of all dates.†

Having directed attention to the most glaring errors in the works of the present age, we cannot conclude without doing justice to the great advances which are visible in the arts of ornamentation, in the internal finishings of our dwellings, and in all the mechanical details of architecture. With these advantages (of which the ancients were deficient), a corresponding advance in architecture ought to have resulted; but unfor-

* To describe more minutely these peculiarities, would only be to direct censure to some buildings where the architects are not altogether responsible for the inconsistencies.

† What can be worse than to see the body of a church shorn of all mouldings, to lavish an unnecessary amount of enrichment on a tower?—it conveys the idea that the latter is the most important or sacred part of the building: or in an old building, where the upper part of a tower is earlier in date than that below it, to recommend a restoration of it with this defect? Of a verity it is as inconsistent as to revive bad orthography, or to follow the example of the Chinese tailor, who, on having a patched coat sent to him for a pattern for a new one, copied it correctly, even to the colour of the patches.

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tunately it is too evident that the mechanic is before the architect in the art of invention, and the former too frequently leads the latter. We have, however, one grand exception to this rule in the new Parliament Houses, where the matchless and exquisitely carved details are made for their situation. Its faults of over-ornamentation, and of a too equal distribution of enrichment, must be admitted; but still it will (like St. Paul's cathedral) reflect honour on the century in which it was erected, and remain, when other buildings are only a matter of history, as a monument of the talent of the architect, the skill of the artists, and the perfection of the manufactures of the nineteenth century.

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APPENDIX:

CONTAINING SOME REMARKS ON THE CHURCHES OF

SIR CHRISTOPHER WREN,

AND THOSE OF HIS SUCCESSORS, HAWKSMOOR AND GIBBS.

(Extracted from 'London and its Vicinity,' recently published by Mr. Weale, in 2 vols.)

St. Stephen's, Walbrook, is considered the most original and beautiful of the fifty parochial churches rebuilt by Wren in consequence of the great fire in 1666. In many, perhaps most, of these structures, the doggedness of the authorities confined him rigidly to the Catholic routine of nave and aisles, and in these, of course, he could do little. The more licence he could obtain to deviate from this everlasting mimic basilica, the better he succeeded; and to say that this is the building in which the greatest deviation therefrom was allowed, is tantamount to pronouncing it his masterpiece. * * * * Though a simple cell enclosed by four walls, the tameness of that form wholly disappears behind the unique and varied arrangement of its sixteen columns. They reproduce and unite almost every beauty of plan to be found in all the cathedrals of Europe. Now they form the Latin cross, with its nave, transept, and chancel; anon they divide the whole space into five aisles, regularly diminishing from the centre to the sides; again we perceive, in the midst, a square apartment with recesses on all its sides—a square, nay, an octagon—no, a circle. It changes at every glance, as we view the entablature, or the arches above it, or the all-uniting dome. With the same harmonious variety, we have every form of ceiling brought together at once—flat, camerated, groined, pendentive, domical—yet no confusion. The fitness to its destination is perfect; every eye can see the minister, and every ear is within hearing distance of him, in every part of the service. It is

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St. Mary-le-Bow.

(Page 176)

St. Bride's.

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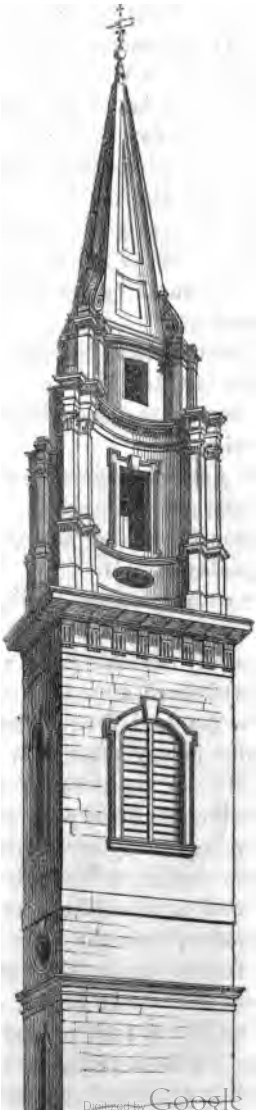

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Christ Church. (Page 177) St. Vedast's.

the most beautiful of preaching-rooms; and though only a sketch, and executed only in counterfeit building, would, if carried out in Wren's spirit instead of his employers', form the most perfect of Protestant temples.

St. James's, Piccadilly, is about the largest of Wren's churches, but at the same time the most meanly built, everything about it indicating such extreme parsimony, that he seems to have given up the exterior in despair, bestowing on it only a few of his favourite cherubs' heads. It has lately been improved by the addition of a cornice, which it much wanted.

Christ Church, Newgate Street (see p. 177), is very similar to the last, but with an elliptic central ceiling, and is one of the best-proportioned churches on the basilican plan, with galleries.

St. Anne and Agnes, north of the Post Office; St. Martin's, Ludgate; St. Antholin's, Budge Row; and St. Swithin's, Cannon Street, are among those which display the greatest originality of plan.

In nothing was the fertility of Wren's invention so strikingly displayed as in the belfries of his churches, which, being frequently the only parts visible at all from a right distance, received much attention; and their extraordinary diversity of forms (as seen from either of the eastern bridges) has no parallel in any other city, and contrasts strangely with the monotonous repetition of two round temples and an attic, pervading the other parts of London, or the everlasting mock-Early-English pyramid that now succeeds them.

The steeples of Wren all rise from the ground, and not from the roof of a building; they all have a regular increase of decoration, from the plain and solid basement to the broken and fanciful finish; they are all square and undiminished up to half their entire height, often more, but perhaps always to the middle of that portion expected to be generally visible above the houses; and in all, except those of St. Paul's, the upper or pyramidal portion is so arranged that in almost every

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view its outlines may touch (and be confined by) two straight lines meeting at the summit. In later times all these rules have generally been reversed, especially the last, our modern steeples affecting a convexity of outline whose prominent points are limited by the form of a pointed arch instead of a triangle. Wren employed this convex outline in the belfries of St. Paul's alone, plainly showing his sense of its fitness to a situation requiring more breadth and majesty; in fact, a character altogether distinct from that of parochial steeples, where he has given a lighter and more feminine expression by the triangular outline. The proportions of his triangle vary from an equilateral to one whose height is six times its base.

St. Mary-le-Bow, commonly called Bow Church, Cheapside, and St. Bride's, Fleet Street (p. 176); Christ Church, Newgate Street, and St. Vedast's, Foster Lane (p. 177), have the steeples of the tallest proportion; and the two former are the tallest in London, having been apparently intended to equal exactly those of St. Paul's, or about 235 feet, but St. Bride's has been reduced a few feet. The diversity of these four steeples is admirable. Bow has been the general favourite, probably from the variety of plan in its different stories. In the other three, one plan, different in each, is preserved throughout the pyramid: in Christ Church, a square; in St. Bride's, an octagon; in St. Vedast's, a figure of four concave quadrants. The depth of hollowing in this last does not, in an English climate, form a sufficient substitute for thorough piercing or detached members, so that the whole is too solid and flat, but would answer well in Italian sunshine. Christ Church has one great merit, that of more connection and mutual dependence between the stories than usual; but its outline has been destroyed by the removal of a few vases. St. Bride's is, considered by itself, far from the happiest of Wren's works, and, if it stood alone, would be justly called puerile, but it adds a pleasing variety to the general assemblage; and though one design on this principle is enough,

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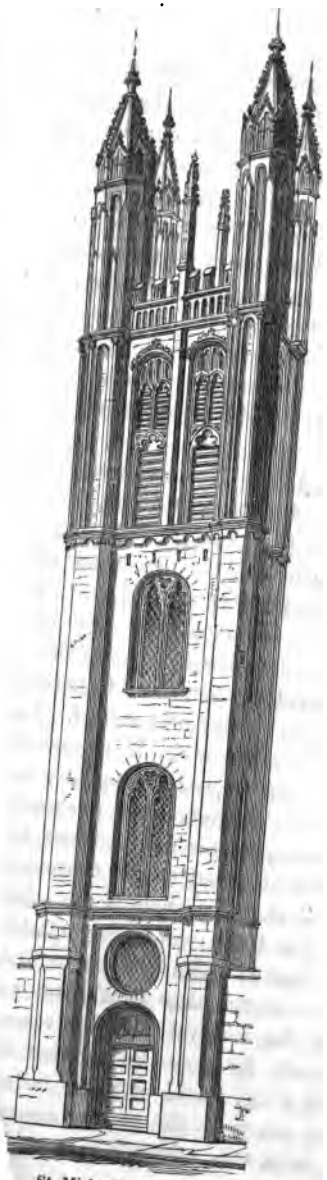

St. Michael's, Cornhill.

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St. Dunstan's.

St. Martin's Church.—P. 181.

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that one required to be on a large scale to carry out the idea thoroughly.

St. James's, Garlick Hill; St. Michael's, College Hill; St. Stephen's, Walbrook; and St. Bennet's, Paul's Wharf, are some of the finest of his numerous steeples, whose upper part is limited by a pyramid of a lower proportion.

St. Michael's, Cornhill, and St. Dunstan's, near the Custom House (p. 180), present, in their belfries, Wren's nearest approaches to the old Gothic style; for his works present every shade of intermediate design between these and pure Italian. His faults, in the Gothic, are precisely the same as when following his usual style; but the flatness, shallowness, and littleness of mouldings, become here far more glaring, simply because his tendency this way is not restrained by rules and proportional measures, such as the Italian systematizers had laid down.

St. James's, Garlick Hill.

It will be observed, that though Wren's constant profession was to imitate the ancients, such an idea as that of the mere revival, or histrionic representation, of any ancient style, could never have been entertained by him; otherwise, his great admiration of Salisbury Cathedral and Westminster Abbey, and long employment on the repairs of both those matchless fabrics, could not but have led him to the production of some mock-Early-English, which, however, was reserved for this nineteenth century. His words, if taken in their modern sense, would strangely contradict his works, for his expressions

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of reverence for antiquity, and endeavour to follow its rules, could not have been more modest if St. Paul's had been only a sham temple, like the Madeleine or Walhalla.

The churches erected by Wren's successors, Hawksmoor and Gibbs, were more liberally built and far more more ornate than those of the great architect himself, especially their exteriors, which, however, were not, as in later times, enriched *at the expense of the interior.*

Five churches by these masters are worthy of notice:

St. Mary's, Woolnoth, in Lombard Street, is the masterpiece of Wren's pupil, Hawksmoor, and by far the most original work erected since his time. The exterior seems to have been designed with a view towards the foreseen opening of a new street, which has since taken place; and both the north and west faces are well fitted, the former to its aspect, and the latter to its present situation. The interior is unique for a church, and apparently imitates Vitruvius's description of one sort of ancient atrium. Its great merit is, that the galleries, though very capacious, are not offensive. It seems incredible, did we not see proof of it on every side, that a problem of daily requirement in modern times should, though solved more than once, be now given up in despair.

St. George's, Bloomsbury, by the same architect, is remarkable for the picturesque grouping of its front, and majestic effect of its portico, which is on the principle of the ancient Roman ones, which style, indeed, this artist seems to have studied more than the modern Italian. The crowning of the tower, however, by a pyramid of steps, is a sad mistake. That form is (or represents) the most massive and solid in all architecture, therefore the most unfit form possible for a finish, and it should be replaced by some light open composition, enclosing and sheltering the statue, instead of hoisting it aloft to the storms.

St. Mary-le-Strand, the first church erected by Gibbs, shows, altogether, a very tawdry taste, and is remarkable for the very singular conceit of making a single apartment appear

externally of two stories. Even counterfeit littleness, however, is perhaps better than counterfeit greatness.

St. George's, Hanover Square, is the best, or rather the least faulty, of the works of James, who introduced the fashion of

St. Botolph, Bishopsgate.

placing the belfry centrally behind a portico; which in this ase was, perhaps, from the peculiar plan of the neighbour-

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hood, its only good position, for it falls nearly in the axis of three streets, Grosvenor and Maddox Streets, and Harewood Place, and, seen from the latter, forms part of one of the very few groups in London that can be called picturesque. This belfry is also well fitted to its novel situation, and not too high for the portico below. The north side shows by its boldness, that *aspect* was still considered, and allowed to influence architectural composition, which, perhaps, it has never since done.

St. Martin's in the Fields (see p. 181), now in Trafalgar Square, and the most conspicuous church in London, is by Gibbs, and, though shining like a gem among more modern works, cannot be considered an improvement on anything preceding it. The steeple is here too much for the portico, and should have been placed elsewhere. The whole air is pompous and ostentatious, and the enrichment, which was now almost turned out from the interior to the exterior of churches, seems working itself to the surface, and introducing us to an age in which beauty should not even be skin-deep. The interior is in a style only fit for a theatre.

St. Botolph's, Bishopsgate, is a favourable specimen of the less pretending churches of the same age (that of George I.). It is the only known work of its architect, James Gold.

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TO

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9. ENCYCLOPEDIE d'ARCHITECTURE, JOURNAL MENSUEL: contenant 120 Planches gravées publiées sous la direction de M. VICTOR CALLIAT, Architecte; un Texte descriptif et des Notices historiques par M. ADOLPHE LANCE, Architecte. 2 vols. (2 years) 4to. £2. 12*s.* 6*d.*

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